THE AMERICAN JOURNAL of PSYCHIATRY

VOLUME 104
NUMBER 10
APR. 1948

1948 Annual Meeting
Hotel Statler
Washington, D. C.
May 17-20, 1948

Official Organ of
THE AMERICAN PSYCHIATRIC ASSOCIATION

THE AMERICAN JOURNAL OF PSYCHIATRY

THE CEILING EFFECT OF GLUTAMIC ACID UPON INTELLIGENCE IN CHILDREN AND IN ADOLESCENTS [1]

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This paper deals with the ceiling effect of l(+)-glutamic acid upon intelligence following one year of treatment. It arises naturally from a 6 months' group study on the effect of glutamic acid upon intelligence in children and adolescents. In that paper, which is now in press(1), it was determined that glutamic acid definitely accelerates the rate of learning in children and in adolescents. The aforementioned study grew out of our experiment on white rats, where maze learning was significantly enhanced by addition of glutamic acid to the diet(2). Albert and Warden(3) also verified our results on rats, using a much more complicated problem box.

The present study is the culmination of our researches on glutamic acid and is an attempt at determining the upper limit of the facilitating effect of glutamic acid on mental functioning in human subjects.

MATERIALS AND METHODS

Choice of Patients—Experimental Group.—Patients were originally selected on the basis of neurological and psychological criteria. Neurologically we tried to include cases without complicating organic features, but this did not prove possible, especially among children of low intelligence. Therefore, in order to secure a large enough group, as well as to explore the effect of seizures upon intelligence, we included mentally retarded children with convulsive disorders. Among the group with convulsive disorders we likewise included a few patients with normal intelligence.

Psychologically the group constituted a sample with a wide range of age and intelligence levels. Sixty-nine patients were included in our original experimental group and have been receiving glutamic acid therapy during the past year. Results of the effect of glutamic acid therapy for the first 6 months appear in an article which is now in press(1), and the present paper is a report on the first 30 cases completing a full year of glutamic acid therapy. Of the present 30 cases, 14 are children and adolescents with convulsive disorders, of whom 7 are mentally retarded also. Sixteen are mentally retarded without convulsions, making a total of 23 mentally retarded patients considered.

Control Group.—Our control group consists of 37 patients who were tested a number of times over a period of years and were then used as part of the experimental group. The total number of previous psychometric tests on these 37 control patients amounted to 51 tests available before experimentation with glutamic acid. This control group consisted of mentally retarded patients both with and without convulsive disorders. The control psychometric tests were repeated over a period ranging from 6 months to 8 years prior to glutamic acid therapy.

Dosage.—It is imperative to have a careful evaluation of the neurologic and intellectual situation before starting treatment, in order to gauge results.

Since much of the acid is lost by metabolism in the liver, by transamination, and by competition of the various organs of the body for this amino acid, the effective dose

[1] Read at the 103rd annual meeting of the American Psychiatric Association, New York, N. Y., May 19-23, 1947.

From the Department of Neurology, Columbia University, College of Physicians and Surgeons, the Service of Child Neurology, Vanderbilt Clinic and Neurological Institute, and the Department of Psychology, Neurological Institute.

The expenses of this investigation were defrayed in part by a grant from the Commonwealth Fund, supplemented by a grant from the Putnam-Salzer Gift.

must be determined empirically for each individual as follows:

Glutamic acid is administered in gradually increasing doses to the point where increased motor and psychic activity is apparent. This dose may then be maintained, or reduced slightly, depending upon the amount of activity evoked and the ease with which this increased activity can be channelized productively. Overdoses may produce distractibility, or even insomnia, especially if the third dose is given too close to bedtime. The effective dosage covers a wide range and may vary from 6 to 24 grams per day in 3 divided doses. In a few instances it was necessary to give 48 grams per day before qualitative signs of effectiveness became apparent. On the average, however, 12 grams is sufficient. Glutamic acid is administered orally in tablet, powder, or capsule form. It is important to note that it is insoluble. No untoward side-effects have been observed, except an occasional gastric distress which can usually be corrected by discontinuing treatment for a few days and then beginning with smaller doses which are gradually increased as tolerance develops.

After the effective dose has been established, periodic examinations are continued, usually about once a month, throughout the 6-month period, at the end of which time another psychometric examination is performed.

Procedure.—Children and adolescents in the experimental group were tested prior to glutamic acid therapy, at the end of 6 months of treatment, and again following one year of treatment. The present group ranges in age from 5 years to 16 years, and in intelligence quotient from 38 to 131 at the time of the first test. Before glutamic acid therapy, the entire group was given the Stanford-Binet test, Form L, 1937 revision(4); the Arthur Point Scale(5) or Merrill-Palmer (6) performance tests; and the Rorschach inkblots(7). Retests were made with the same battery after 6 months and one year.

Results

Table 1 gives the Stanford-Binet and performance test scores for the group at the beginning of the experimental period and at the end of 6 months of glutamic acid treatment. The average chronological age for the group was 11 yrs., 4 mos., prior to glutamic acid therapy, and the average mental age was 7 yrs., 3 mos., giving an intelligence quotient of 64.00, which is near the upper end of the defective range, and which suggests serious retardation in mental growth. Following treatment the mental age is 8 years., 7 mos., on the Stanford-Binet test, representing a gain of 16 mos. in mental age during the 6-month period, or more than twice as fast as is expected of children having average intelligence, since a gain of 6 mos. in mental age usually accompanies 6 mos. growth in chronological age in the average child. The intelligence quotient is raised 8.67 points from 64.00 to 72.67, giving a critical ratio of 1.37, and 91 chances in 100 that the gain is statistically significant, or not due to chance factors.

On performance tests the average mental age rises from 7 yrs., 4 mos., before treatment to 8 yrs., 6 mos., showing a gain of 14 mos. during the 6 months' interval, and 93 chances in 100 of a true difference. Some increase in mental age would, of course, be expected because the group is 6 months older at time of retest but in the control group mere increase in chronological age proved of little importance in raising retest scores of children with this degree of mental retardation.

In Table 2 Stanford-Binet and performance scores of the second retest are given, *i.e.*, those following one year of treatment. The mental age on the Stanford-Binet test is now 9 yrs., 3 mos., showing a gain of 8 mos. during the last 6 mos. of therapy. The intelligence quotient has also risen to 74.87, giving a point change of 2.20 for the second half of the year and a critical ratio of .31, with only 62 chances in 100 of a true gain between the second and third test scores.

On performance tests the gain in mental age for the second 6 months of treatment is slightly higher than that on verbal material, the mental age of 8 yrs., 6 mos., at the beginning of the period rising to 9 yrs., 4 mos. This indicates a gain of 10 months in mental age on performance tests during the second 6 months of therapy, with a critical ratio of .77 and 77 chances in 100 of a real difference in retest scores.

TABLE 1

Test	Before glutamic acid treatment						After 6 months of glutamic acid treatment							
	Av. C. A.	N	M. A. 1	I. Q. 1	σ	$\sigma_{av.}$	M. A. 2	I. Q. 2	σ	$\sigma_{av.}$	D/σ dif.	Change M. A. +	Point change I. Q. +	Chances of a real difference
Stanford-Binet	11 yrs., 4 mos.	30	7 yrs., 3 mos.	64.00	22.13	4.05	8 yrs., 7 mos.	72.67	26.66	4.87	1.37	16 mos.	8.67	91 in 100
Performance	.. ..	..	7 yrs., 4 mos.	..	2.54	.46	8 yrs., 6 mos.	..	3.53	.65	1.45	14 mos.	..	93 in 100

TABLE 2

Test	After 6 months of glutamic acid treatment						After 1 year of glutamic acid treatment							
	Av. C. A.	N	M. A. 2	I. Q. 2	σ	$\sigma_{av.}$	M. A. 3	I. Q. 3	σ	$\sigma_{av.}$	D/σ dif.	Change M. A. +	Point change I. Q. +	Chances of a real difference
Stanford-Binet	11 yrs., 10 mos.	30	8 yrs., 7 mos.	72.67	26.66	4.87	9 yrs., 3 mos.	74.87	27.31	4.99	.31	8 mos.	2.20	62 in 100
Performance	.. ..	..	8 yrs., 6 mos.	..	3.53	.65	9 yrs., 4 mos.	..	3.97	.73	.77	10 mos.	..	77 in 100

TABLE 3

Test	Before glutamic acid treatment						After 1 year of glutamic acid treatment							
	Av. C. A.	N	M. A. 1	I. Q. 1	σ	$\sigma_{av.}$	M. A. 3	I. Q. 3	σ	$\sigma_{av.}$	D/σ dif.	Change M. A. +	Point change I. Q. +	Chances of a real difference
Stanford-Binet	11 yrs., 4 mos.	30	7 yrs., 3 mos.	64.00	22.13	4.05	9 yrs., 3 mos.	74.87	27.31	4.99	1.69	24 mos.	10.87	96 in 100
Performance	.. ..	..	7 yrs., 4 mos.	..	2.54	.46	9 yrs., 4 mos.	..	3.97	.73	2.12	24 mos.	..	98 in 100

If results of the Stanford-Binet test for the entire interval of one year are considered, Table 3, a gain in mental age of 24 mos. in a 12-month period is noted, which is twice as fast as the development of children with average intelligence. A rise of approximately 11 points (10.87) in the intelligence quotient gives a critical ratio of 1.69, or 96 chances in 100 of a statistically significant difference between initial and final test results.

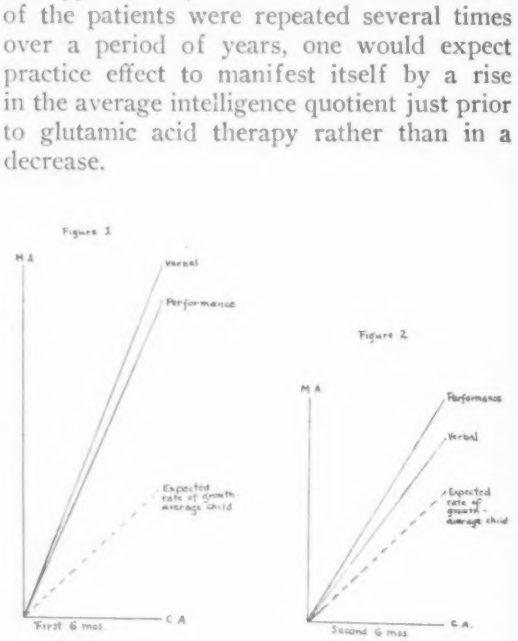
Although performance test scores show a difference in rate of change during the first and second halves of the year, being 14 mos. and 10 mos. higher, respectively, as compared with the Stanford-Binet mental ages on verbal tests which are 16 mos. and 8 mos. higher, the total gain of 24 mos. on performance test scores for the whole year suggests the same rate of growth on motor tasks as on the verbal intelligence test material, rising from 7 yrs., 4 mos. to 9 yrs., 4 mos., with 98 chances in 100 of a statistically significant difference on performance test results. This is twice as fast as scores of average children increase on this type of test.

Fig. 1 is a graphical representation of the increase in mental age for the group on verbal and on performance tests for the first 6 months of treatment, and Fig. 2 for the second 6 months. The rate of development expected of children with average intelligence also appears.

Fig. 3 depicts results for the full year of treatment.

Rorschach Tests.—Presentation of Rorschach results is beyond the scope of this paper. Qualitatively and quantitatively, however, genuine improvement is reflected, and patterns obtained agree well with the results of the other tests indicating more dynamic changes during the first 6 months of treatment than during the second 6 months. In addition to greater productiveness, better social and emotional adjustment appears in many cases, suggesting that glutamic acid therapy may produce basic changes in the personality structure.

Control Group.—Data on our control group revealed that practice had little or no effect upon the intelligence quotient. The average intelligence quotient of the previous psychometric tests of the control group was 62.84. The average intelligence quotient of the control group just prior to glutamic acid therapy was 61.76. Since tests on a number of the patients were repeated several times over a period of years, one would expect practice effect to manifest itself by a rise in the average intelligence quotient just prior to glutamic acid therapy rather than in a decrease.



Change in mental age during glutamic acid therapy.

Our control group of mentally retarded epileptic patients also revealed that a rise in intelligence quotient does not automatically follow control, or even a marked reduction of the incidence, of epileptic seizures. This was discussed at length in our previous papers (1 and 2), and in this our findings agree with the majority of studies reported in the literature.

The influence of suggestion upon the rise of the intelligence quotient, since the patients knew the nature of the drug, appears to have little or no measurable effect, as has been demonstrated by Albert, Hoch, and Waelsch(8), who found that the introduction of placebos during glutamic acid therapy resulted in a reduction of scores and the

resumption of glutamic acid therapy again produced striking increases.

In performing such an experiment as this, marked or abrupt environmental changes might possibly influence the intelligence test score. This was not an important factor in the present investigation since all our subjects were clinic patients and the daily pattern of their lives was not appreciably altered. Our social workers kept this factor under surveillance.

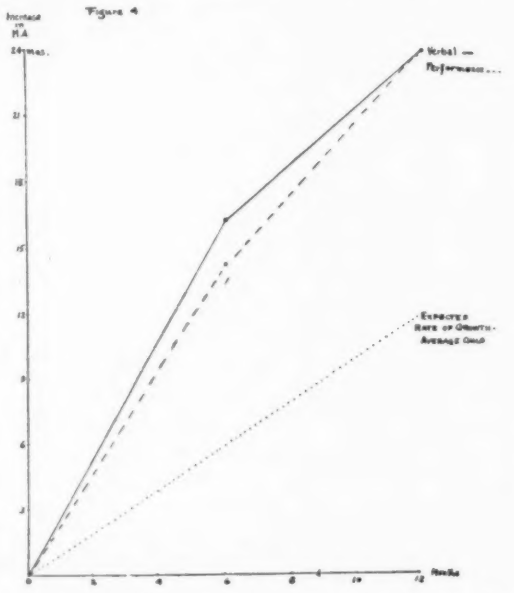
Discussion

The intelligence quotient point gain for the year ranges from zero to 17 points. Ten cases gained 12 points or more; 12 cases gained 6 points or more; the point gained in the remaining 8 cases ranged from zero to 6 points. Only one case failed to gain during the experimental period of one year.

On the Stanford-Binet test the group shows an average gain in intelligence quotient of approximately 11 points (10.87) during one year of glutamic acid therapy. In terms of mental age this reflects a gain of 24 mos., or a rate which is twice as fast as that expected of children with average intelligence. Of this group gain, 8.67 points occur during the first 6 months of treatment and 2.20 points during the last 6 months. In 97% of the group the second intelligence quotient is higher than the first, but in only 53% of the group does the third intelligence quotient exceed the second quotient. This suggests that more change took place during the initial period of therapy, and that although the intelligence quotient for the group is still rising at the end of one year, intelligence test scores appear to be rapidly approaching an upper limit or ceiling. The same trend is apparent in the performance test results (see Fig. 4).

While our findings do not indicate that an absolute ceiling has been reached in terms of a mathematical zero point, the rate of deceleration in our curve (Fig. 4), indicates that a normal rate of mental development in terms of the ratio of mental age to chronological age (one year of mental age equivalent to one year of chronological age) may be reached within the next few months. It must still be remembered that the normal rate of development is a much higher rate of speed than the child had before treatment. Whether or not this normal rate of speed in mental development will be maintained, or whether it will eventually recede to the pre-therapeutic level, we are unable to say at this time.

It must be emphasized that the glutamic acid treatment of mental retardation demands careful observation and management. Each case requires special handling. Maximum results depend upon the administration of glutamic acid in amounts sufficient to produce maximum stimulation without the dissipation of energy in excessive distractibility. This can be obtained only by achieving a delicate balance between the amount of drug administered and the amount of energy produced.



Difference in rate of improvement on verbal and performance test scores during first and second six months of treatment.

Other problems are likewise inherent in the treatment. Glutamic acid is insoluble and has a rather unpleasant taste. Since the treatment is protracted, masking the taste properly becomes an important factor in the maintenance of regular medication. There is also the difficulty at times in persuading the parents that absolute faithfulness in taking the medicine regularly is imperative, since in every instance where medication was taken irregularly, a change in alertness could

be detected clinically, both by the neurologist and the psychologist. When one is dealing with parents with an excessive sense of guilt manifesting itself in the form of overprotectiveness, it becomes exceedingly difficult to continue regular medication if the child rebels because of improper masking of the taste of the acid.

Another difficulty encountered revolves around having a psychometric battery given by a qualified psychologist. The difficulty in making this clear to parents apparently arises out of the indiscriminate administration of intelligence tests by unqualified persons.

The underlying physiologic mechanisms responsible for the effect of glutamic acid on intelligence are not as yet entirely clear. However, a number of experiments have pointed to the fact that l(+)-glutamic acid has a particular relation to cerebral metabolism. Weil-Malherbe(9), for example, has reported that l(+)-glutamic acid is the only amino acid known to be metabolized by slices of brain tissue. It seems proper therefore, according to Green(10), "to consider the possibility that, just as myosin is specialized for muscular contraction, rhodopsin or visual purple for photochemical reactions, and haemoglobin for oxygen transfer, so there may be one or more proteins" or amino acids "in nerve tissue specialized for the reactions which underlie the propagation of a nerve impulse."

The point has also been made that the dynamic chemical events of the cell "almost without exception require the presence of protein catalysts which we call enzymes." The recent investigations of Nachmansohn and his associates(11) involve such enzymatic reactions. Their researches suggest that the release of acetylcholine is intrinsically connected with the electrical changes during nerve activity. They have also isolated an enzyme, choline acetylase, which synthesizes acetylcholine(12). Of further interest is their finding that l(+)-glutamic acid acts as a catalyst in the production of acetylcholine. When the acetylcholine-producing enzyme, choline acetylase, is inactivated by dialysis, the addition of l(+)-glutamic acid reactivates it(13). Cysteine and alanine also have some catalyzing effect, but none of these amino acids is metabolized by the brain.

The demonstration in vitro of an increased rate of formation of acetylcholine in the presence of glutamic acid, plus the intrinsic connection of acetylcholine with nerve activity, makes it possible to assume the physiologic basis of the observed clinical effects of glutamic acid is in some way related to the formation of acetylcholine. At present this seems to be the best interpretation of the mechanism of the changes taking place at the biochemical level.

At the psychological level, our data demand a more flexible and dynamic concept of intelligence than was formerly implied in much of the psychological literature on the subject.

A trend in this direction is indicated by Garrett(14), when he states that "an intelligent person does not possess 'intelligence,' but rather exhibits the capacity to act intelligently (make a high score) when forced by tasks demanding the use of symbols (words, diagrams, numbers, mazes) in their solution."

Since glutamic acid enhances the capacity of individuals to act intelligently and facilities maze learning in the white rat, static definitions implying that the intelligence of an individual is inherent and unchangeable are no longer valid.

Conclusions

1. Glutamic acid accelerates mental functioning in human subjects.

2. The acceleration is general and is not restricted to segments of the intelligence and personality of the individual.

3. The greatest improvement in intelligence and performance test scores occurs within the initial 6 months of treatment, after which the acceleration is diminished and appears to be approaching a ceiling after one year of therapy.

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CLINICAL AND ELECTROENCEPHALOGRAPHIC OBSERVATIONS CONCERNING THE EFFECT OF TRIDIONE IN EPILEPTIC PATIENTS[1]

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In this paper the clinical results and toxic manifestations observed with respect to 75 epileptic patients who received tridione(1, 2, 3, 4, 5, 6) at Craig Colony are presented. The effect of tridione on the EEG. records is also discussed. A further purpose of this communication is to establish, to some extent, a correlation between amelioration of seizure phenomena, EEG. improvement, and toxic manifestations.

After a careful preliminary physical examination, the patients were placed on tridione 0.3 gm. 3 times daily. After 4 weeks, if no untoward results occurred, the drug was given 4 times daily. Apparently 0.9 gm. (15 gr.) daily is the optimum dose. However, the dosage was diminished to 0.3 gm. or 0.6 gm. daily when untoward effects appeared and later gradually increased if necessary. All patients had previously received dilantin or phenobarbital. These drugs were gradually discontinued during the first 2 months of tridione administration.

Blood counts and urine examinations were done weekly. Records of blood pressure, pulse, and respirations were kept. The eyes, particularly the eyegrounds, were checked prior to and following administration. The patients were carefully watched for untoward or toxic effects. Previous medication was not discontinued until it was felt absolutely safe to do so and then only gradually.

In all instances EEG's. were done before the patients received the drug and after tridione had been administered for 2 months. In some instances the EEG. was repeated monthly since the administration of tridione was continued for more than 2 months.

The patients were grouped as follows: Cerebral palsies of the spastic type, 23; petit mal types, 15; grand mal types, 20; psychomotor types 12; myoclonus types, 5.

[1] Read at the 103d annual meeting of The American Psychiatric Association, New York, N. Y., May 19-23, 1947.

RESULTS

I. Clinical Results

Of 75 patients in this study who received tridione, clinical improvement was observed in 36, or 48% of the patients.

1. The cerebral palsy group, 15 or 65% of whom improved, responded best.
2. The petit mal type responded almost as well. Nine or 60% of this group improved.
3. In the psychomotor group, 50% responded well.
4. Only 30% of the grand mal types were clinically improved.
5. None of the severe myoclonias showed any clinical improvement.

In general, children and the milder cases responded better in all groups. Older cases and those manifesting severe seizure phenomena did not respond well.

II. Effect on EEG. Tracing

Thirty-eight or 51% showed some improvement electroencephalographically. EEG. improvement and clinical improvement did not always coincide.

On the EEG. record the petit mal type manifested the greatest improvement (67%).

Psychomotor types revealed a 58% improvement rate.

Of the spastic cases 52% were improved.

Seven of the 20 grand mal cases showed improvement (35%).

Two of the 5 myoclonias showed improvement.

Diminution of abnormal waves was not observed in 15 of the cases who showed clinical improvement. Furthermore, in 17 patients in whom clinical amelioration of symptoms was not present, the EEG. record showed improvement.

Patients who manifested the high amplitude, slow type of wave, usually of the 2 to 6 per second variety, responded best. High

amplitude waves of the psychomotor variety (6-8 per second) were eliminated fairly frequently. The rapid low amplitude, 20-30 per second type of wave showed little response to tridione. Spikes were eliminated infrequently. Toxic reactions manifested on the EEG. in 10 cases resulted predominately in slowing of the waves and an increase in amplitude.

III. Toxic Manifestations

Severe or more prolonged untoward symptoms were observed in 16 or 21% of the cases. Except in 2 instances the patients who improved clinically did not experience severe or prolonged toxic effects. Untoward manifestations were observed most often in patients with myoclonic manifestations and grand mal attacks but were observed frequently in the psychomotor type as well.

Milder transitory untoward effects were noted in 55 cases. However, many of these cases showed subsequent improvement. Withdrawal signs accompanied by increased seizures and apathy were noted in 3 patients.

Generalized untoward reactions including irritability, fatigue, headache, gastrointestinal disturbances were noted in these 55 patients. Ocular symptoms, subjective in nature, were observed often. Forty-nine patients complained of blurring of vision or the "glare phenomenon."

Most alarming from the neuropsychiatric standpoint were the marked increase in seizure manifestations which were observed in 9 patients. Mental signs of stupor, confusion, or excitement were observed in 7 cases. From the viewpoint of nursing management, dermatitis, which was observed in 11 cases, was an unpleasant manifestation. In 7 patients the systolic blood pressure was decreased temporarily to below 85 mm. of mercury.

From the medical standpoint the most alarming observations were the changes in blood count observed in 46 cases. These were mostly related to the white cells. In 40 of the 46 patients, the alterations were transitory, not too severe, and did not last longer than a week after the drug was discontinued or the dosage reduced.

The effect of tridione on the blood counts of these 46 patients may be summarized as follows:

1. Decrease in white blood cells of 2,000 to 5,000.	39
2. White blood cell count below 4,500	21
3. Increase in lymphocytes to above 50%	30
4. Increase in polymorphonuclear leucocytes	14
5. Increase in eosinophiles	17
6. Increase in monocytes	19
7. Turk cells	8
8. Decrease in red blood cells of one million	7
9. Red blood cell count below 3 million	3

Six patients revealed severe, more prolonged changes in the blood count. These manifestations are summarized below.

A. Case 12.—(Dose 1.2 gm. daily.) The lymphocytic count reached 76. Eleven eosinophiles and 1 Turk cell were observed. The drug was temporarily discontinued. After 3 weeks the administration of tridione was resumed and the dosage reduced to 0.6 gm. daily. Her seizures diminished and her EEG. showed improvement.

B. Case 16.—(Dosage 0.9 gm. daily.) The white blood count rapidly fell to 4,000, a decrease of 3,000 white blood cells. At first the lymphocyte count was increased to 50. Then the polys rose to 72 and the lymphocyte count fell to 23. Later the red blood cells were reduced about 1 million. The drug was discontinued. After resumption on ½ of the dosage, the white blood count was decreased by 3,000. She became confused and the drug was then permanently discontinued.

C. Case 30.—(Dosage 0.9 gm.) The white blood count showed a rapid decrease of 3,000 which was maintained for 2 weeks. The monocyte count was elevated to 17. She became very dull and confused. The drug was temporarily discontinued. She then resumed taking tridione in ½ the previous amount without any further reaction. She subsequently manifested clinical and EEG. improvement.

D. Case 34.—The red blood cells were decreased to 2 million. The white blood count fell to 4,000. The lymphocyte count was 60 and 8 monocytes were found. The drug was permanently discontinued as this patient developed status epilepticus.

E. Case 47.—This white blood count rapidly fell to and was maintained at 4,000, a decrease of 2,500. The lymphocytic percentage was 53 and 10 monocytes were observed. The drug was discontinued because the patient became confused as well.

F. Case 75.—The white blood count fell to 2,950, a decrease of 5,000. The lymphocytic percentage was 59. A marked shift to the left was observed. Twelve eosinophiles, 11 monocytes, and one Turk cell were seen. This patient evidenced signs of prostration and the drug was discontinued.

IV. Correlation of Results

1. *Correlation of clinical and EEG. improvement.*

A. Twenty-one patients of the 36 who manifested a clinical decrease in seizures showed improvement in the EEG. record. In 15 of these 36, there was no appreciable change in the EEG. tracing. EEG. improvement was observed in 10 of 15 clinically improved spastic cases; 5 of 9 improved petit mal; 2 of 6 improved grand mal; and 4 of 6 improved psychomotor types.

B. Of the 38 cases in which EEG. improvement was found, 17 failed to show a corresponding reduction in number of seizures. Of these 17 cases who failed to show clinical improvement, 2 were spastics, 5 petit mal, 5 grand mal, 3 psychomotor, and 2 myoclonias.

2. *Correlation of clinical and toxic effects.*

Only 2 patients who manifested severe toxic effects were improved clinically. These 2 were under 20 years of age.

3. *Correlation of EEG. and toxic effects.*

In 6 of the 16 patients who suffered from toxic effects, the EEG. showed improvement. Three of these (cases 12, 30, and 70) were under 20 years of age. In 8 of the cases, the toxic effects were accompanied predominately by slowing of the waves and increase in amplitude. In only 2 of these 16 toxic cases was there any increase in the rate and increased spike formation.

4. *Other factors.*

A. Age. Twenty-seven of the patients were under 20 years of age. Of these 19 improved clinically. Forty-eight were over 20 years of age. Of these only 17 improved clinically.

Toxic effects were observed in 4 or 15% of the 27 patients under 20 years of age; 12 (25%) of the 48 patients over 20 years were subject to severe untoward reactions.

EEG. improvement was observed in 25 of the 48 patients over 20 years of age and in 13 of the 27 patients under 20. Thus, while diminished toxic effects and clinical improvement following the administration of tridione appear to be present more often in younger individuals, EEG. improvement was not influenced as much by the age of the individual.

B. Severity of seizures. Of the 28 patients who experienced milder seizures, 20 improved clinically. Of the 47 patients who experienced severe seizures, 16 improved clinically. Severe toxic effects were noted in 14 of the 47 patients with severe seizures, while they were observed in only 2 of the 28 patients with mild seizures.

EEG. improvement was observed in 18 of the 28 patients having mild seizures and in 20 of 47 individuals with severe seizures. Therefore, clinical and EEG. improvement and fewer toxic effects were seen in those individuals with mild seizures, and the converse was true for those experiencing severe seizures.

C. Duration of epilepsy. Of the 50 patients who had had seizures over 5 years, only 14 improved clinically. Of the 25 patients who had had seizures less than 5 years, 22 showed clinical diminution of their seizure record.

Toxic effects were observed in 13 (26%) of the 50 patients who had had seizures over 5 years and were observed in only 3 (12%) of the patients who had had seizures less than 5 years.

EEG. improvement was observed in 25 of the 50 patients who had had seizures for more than 5 years and in 13 of the 25 patients who had had seizures for less than 5 years.

While clinical improvement and a relative paucity of toxic reaction were more liable to occur in patients who had epilepsy for a relatively shorter period of time, the shorter duration of the epilepsy did not as favorably influence the tridione effect on the EEG. An exception to this general result, however, was found in the cerebral spastic group: Eight of the 12 who showed improvement on the EEG. were ill less than 5 years.

D. Sex. Clinically 17 or 55% of 31 males showed improvement while 19 or 43% of 44 females responded favorably. Electroencephalographically 14 of 31 males and 24 of 44 females showed improvement. Toxic effects were noted in 9 females and in 7 males.

V. Evaluation of Clinical and EEG. Findings

The discrepancy between clinical amelioration of symptoms and EEG. improvement

appears to be due to the following factors:

A. Variable effect of tridione.

1. Toxic effects. Severe untoward manifestations and lack of EEG. improvement did not coincide as often as did the occurrence of the toxic reactions and lack of clinical improvement. These untoward reactions did not as often adversely influence the EEG. record as they did the clinical picture. For instance, 6 of the patients revealed grave changes in the blood picture and these toxic effects would not be recorded on the EEG. However, they militated against clinical improvement. 2. Paradoxical clinical reaction following the administration of tridione and paradoxical EEG. effects did not always occur in the same individuals. 3. Idiosyncrasies due to the drug were more apparent clinically. 4. Dosage and length of administration. It appears that it would take larger doses and a longer period of administration to produce changes in the EEG. than it did to produce comparable clinical effects. 5. Effects of other drugs previously administered are a source of error in interpretation.

B. Basic EEG., epileptic and personality pattern.

1. Basic EEG. pattern. In many cases, tridione could not be expected to eradicate an abnormal inherent tracing which might be present to some degree even if the patient did not suffer from clinical epilepsy. 2. Age. This factor seems to affect clinical results more than the EEG. tracing. The younger individuals responded better clinically but did not respond as well from the EEG. standpoint. This may be due to the inherent abnormal tracing in some of the younger individuals which might not be improved by any drug. 3. Length of duration of epilepsy. This influenced clinical improvement adversely but did not have as great effect on the EEG. 4. Personality reaction and emotional factors which influence the clinical picture are not as adequately evaluated as yet electroencephalographically. 5. Type of epilepsy and type of EEG. tracings. (a) The differentiation of the epilepsies into grand mal, petit mal, psychomotor types, etc., is not an exact grouping. These are inadequate description terms for all the phenomena involved in the epilepsies. Many grand mal, petit mal, and psychomotor cases, for instance, have symptoms in common. These symptoms are rarely typical for one group, are often associated with signs manifested in other groups, mixed types are very frequent. This is evident on the EEG. tracings where persons with predominantly so-called grand mal seizures show typical spike and wave or slow phenomena. The severity of the clinical epilepsy is frequently not confirmed by an equally severe abnormal EEG. tracing. (b) In the spastic cases, where there was localized destruction of brain tissue, improvement of that sector of the EEG. tracing could not be expected. However, clinical improvement does result since there is more to the epileptic phenomena than the focus itself. (c) Therefore, since the original EEG. tracing and the type of epilepsy did not necessarily correspond, the effects following tridione could not be expected to coincide always.

SUMMARY

1. *Clinical results.*

Tridione was administered to 75 patients suffering from epilepsy. Clinically, tridione appears to be most effective in cases of epilepsy with spastic cerebral palsies of the milder type; 65% of this group were improved. This is particularly true in children with mild attacks or with mild organic impairment whose seizures are less severe and in whom the manifestations observed are of more recent origin.

Sixty percent of the patients who had petit mal seizures were improved. Tridione was of value in one-half of the patients who experienced psychomotor attacks.

Only 30% of the patients with grand mal seizures improved. Tridione appears to be of no value in the myoclonias observed at Craig Colony.

2. *EEG. observations.*

Thirty-eight or 51% of the patients manifested EEG. improvement. Beneficial effect on the EEG. record and clinical reduction of seizures were not always concomitant. In 17 patients in whom clinical improvement was not present, the EEG. record showed improvement, and 15 cases who showed clinical improvement showed no change in the EEG.

Clinically the spastic type responded best;

65% of these cases were improved. The petit mals showed 60% improvement. Electroencephalographically, the petit mal type responded best; 67% of the petit mal cases showed improvement on the EEG. tracing, whereas only 52% of the spastic group showed diminution of abnormal waves. In the psychomotor group 50% were improved clinically and 58% showed EEG. improvement.

Patients manifesting the higher amplitude, slower waves, responded best. The so-called psychomotor waves were eliminated fairly frequently. Diminution in amplitude of waves was frequently present.

3. *Toxic manifestations.*

Toxic reactions occurred in inverse proportion to clinical improvement. Untoward effects were observed most often in the myoclonic type, grand mal, and psychomotor group. Toxic reactions were observed least in the spastic group (9%) and in the petit mal type (13%). In younger individuals only 15% showed toxic effects, while in the older group 25% experienced unfavorable reactions. However, the toxic effects did not influence EEG. improvement as adversely as they did the clinical picture.

CONCLUSION

1. Clinically, tridione appears to be of most value in the treatment of the epilepsies associated with cerebral palsies of the milder type. Petit mal types responded next best. Tridione appears to be of slightly less value in the treatment of psychomotor epilepsies.

2. Improvement in the EEG. following the administration of tridione did not necessarily coincide with clinical benefit. Petit mal cases showed the best EEG. response to tridione. The psychomotor group also manifested EEG. response which was somewhat better than that of the spastic group.

3. Grand mal types and myoclonias showed consistently the least clinical and electroencephalographical improvement and the greatest number of toxic effects.

4. Severe untoward reactions occurred in 21% of the cases. Except in 2 cases where severe toxic manifestations were present, clinical improvement did not ensue. Toxic effects were not as evident on the EEG. tracings as they were clinically.

5. These toxic effects can be minimized by careful observation in a clinic or hospital and by judicious adjustment of the dosage. However, about 10 or 13% of the patients did not tolerate the drug well, because of either toxic effect or idiosyncracy, and in these the drug had to be discontinued permanently.

6. In patients suffering from cerebral palsies, tridione exercised a favorable influence not only on the conduct but also on behavior and coordination, particularly in children.

Tridione apparently produced a better effect on cerebral palsies, petit mal, and psychomotor seizures than did the anticonvulsant medications which the patients had received previously.

ILLUSTRATIVE EEGs.

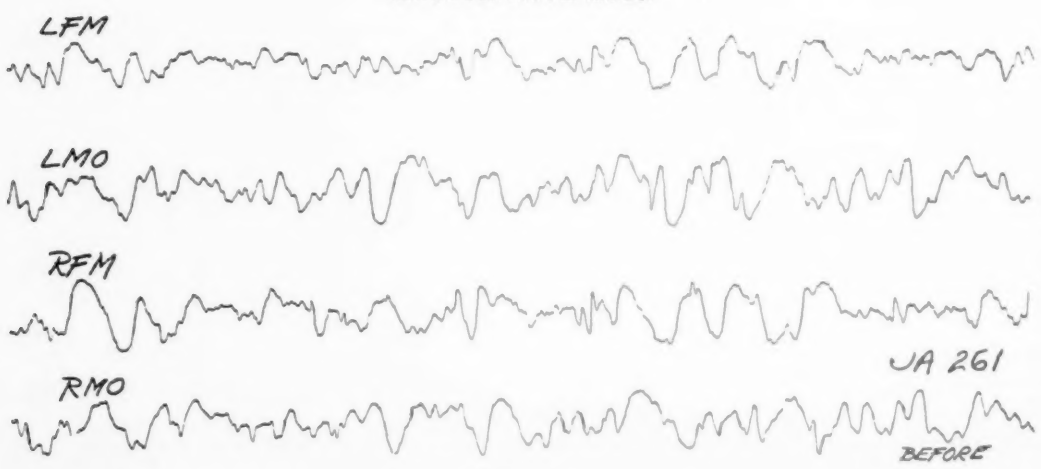

FIG. 1 A.

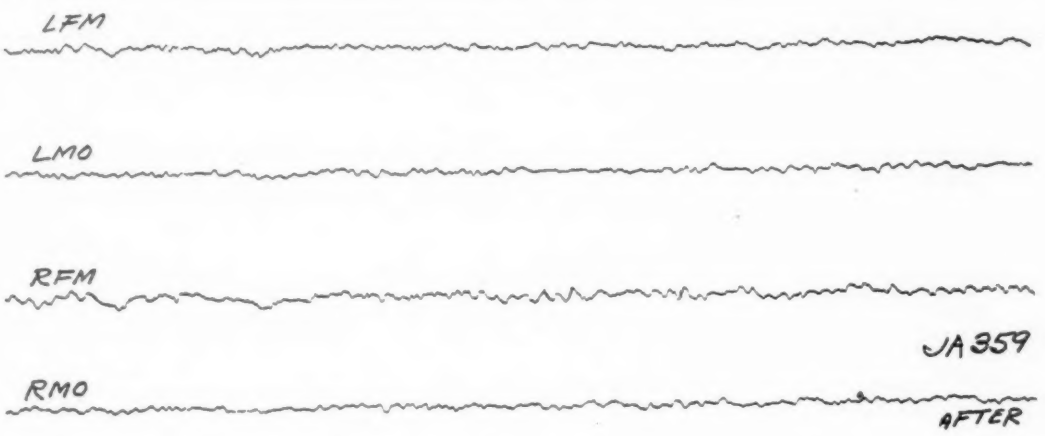

FIG. 1 B.

J. A. Clinical improvement—8 years (P. M. seizures). EEG. improvement.

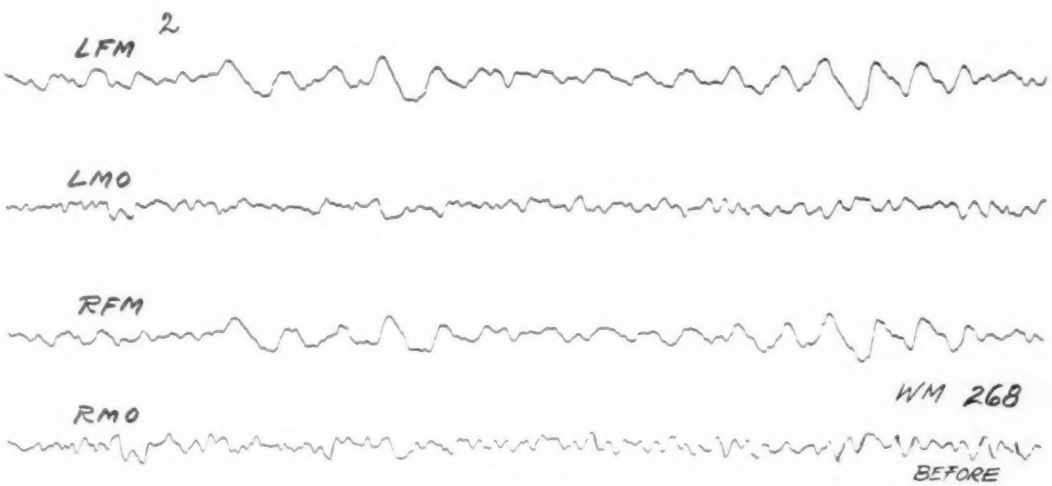

FIG. 2 A.

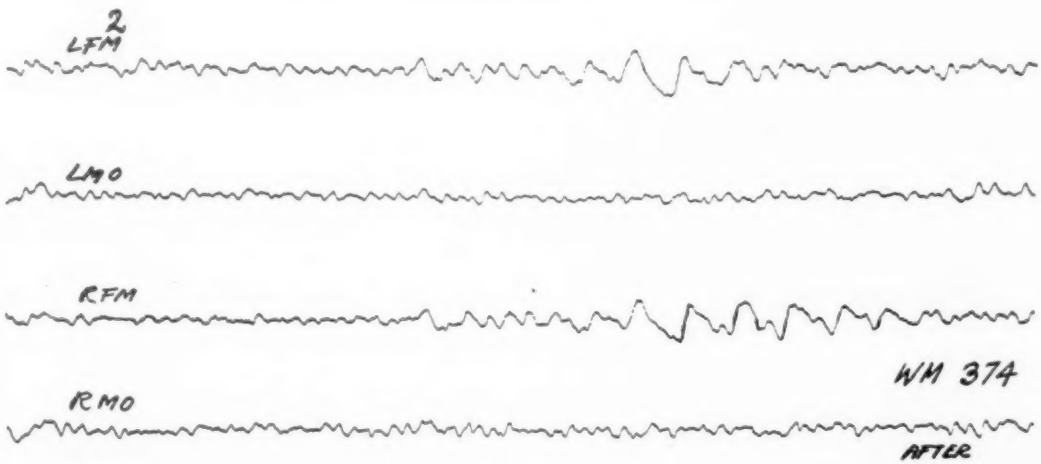

FIG. 2 B.

W. M. Clinical improvement—16 yrs. (P. M. seizures) EEG. improved only slightly.

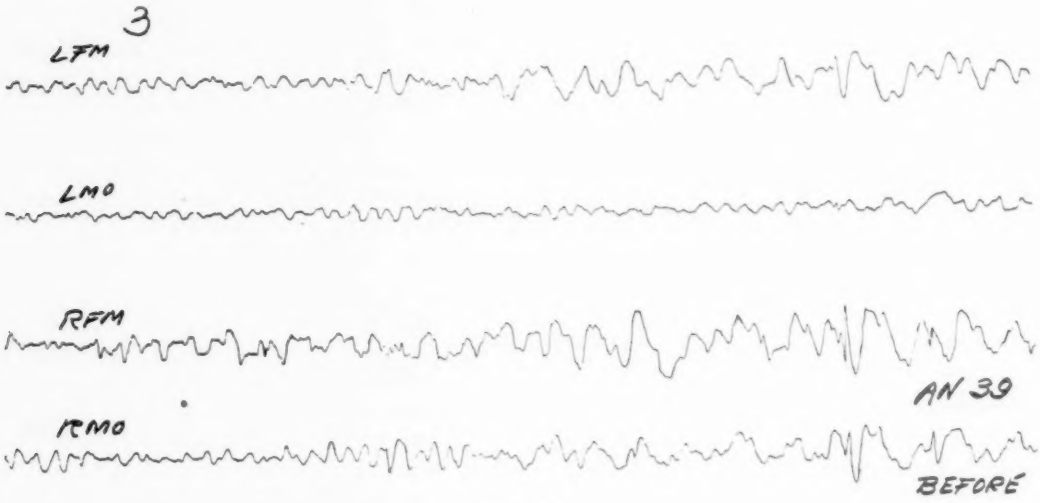

FIG. 3 A.

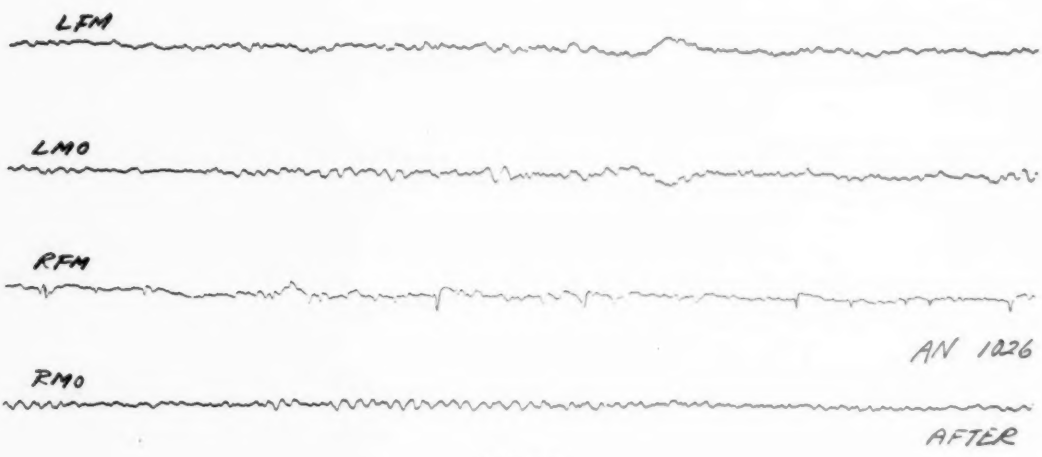

FIG. 3 B.

A. N. (sister to E. N.)—26 yrs. (G. M. seizures). Clinically unimproved. EEG. improved.

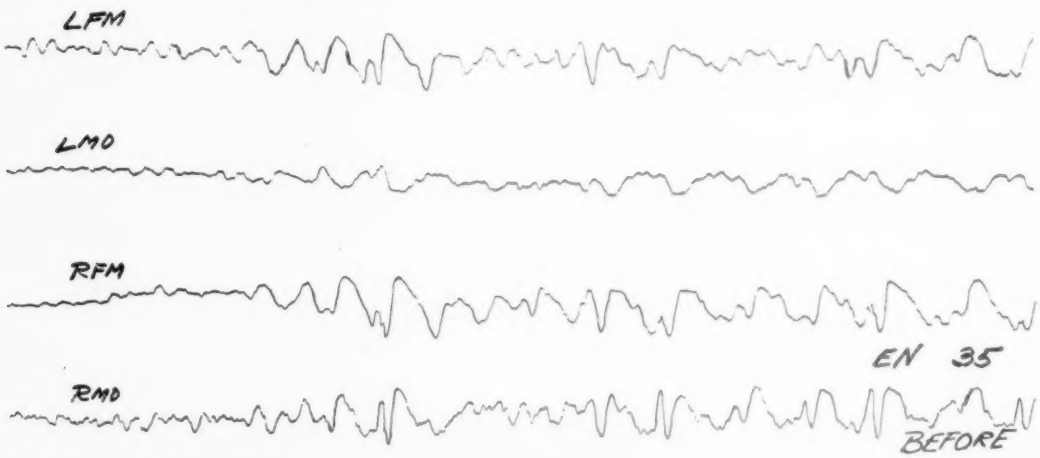

FIG. 4 A.

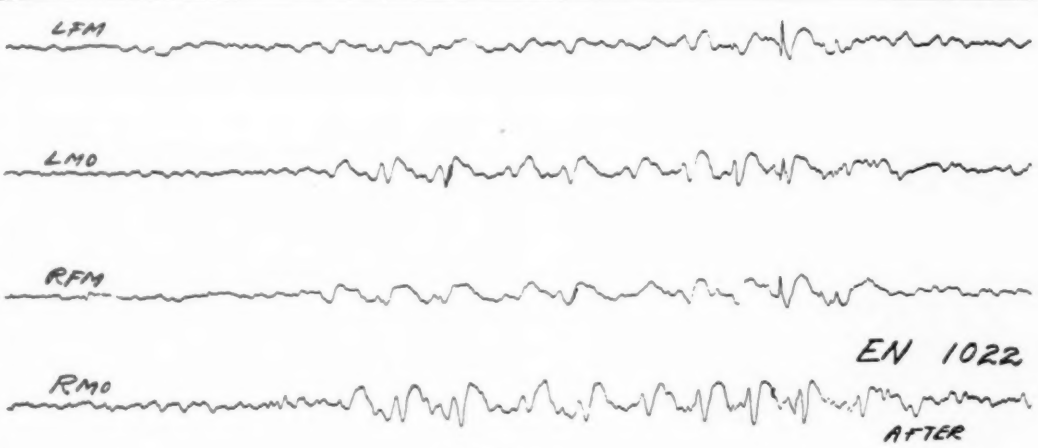

FIG. 4 B.

E. N. (sister of A. N.)—21 yrs. (G. M. seizures). Clinically unimproved. EEG. unimproved. Although slight decrease in amplitude present.

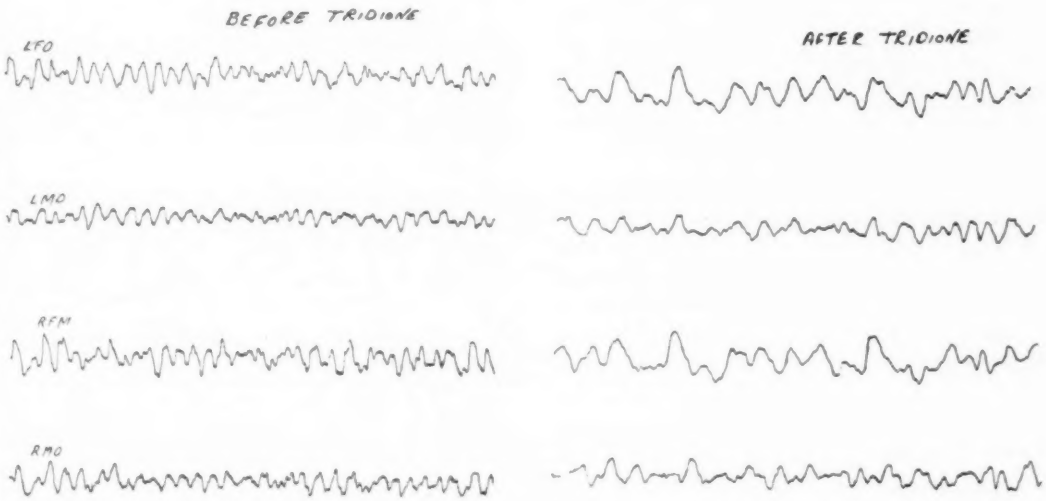

FIG. 5 A. FIG. 5 B.

Illustrates toxic effects.

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THE USE OF ERGOTAMINE COMPOUNDS IN THE TREATMENT OF ACUTE SIMPLE ANXIETY STATES [1]

DOUGLAS McG. KELLEY, M.D., MED. SC. D.

Almost every psychiatrist who has dealt with cases of acute combat-incited neuroses has wished at one time or another to have a drug at hand which would act as an antagonist to the oversympathetic stimulation which so commonly appears as a major feature of the symptomatology of such cases. Early in 1944, a report appeared by Heath and Powdermaker(1) indicating that ergotamine tartrate might be such a drug. This compound had, of course, been used in psychiatry before, but these workers had tried it on a group of merchant seamen who had demonstrated satisfactory adjustment until battle experience overwhelmed them. Their symptomatology was primarily physiological and they fall in Kardiner's classification of the physioneuroses uncomplicated by the complex psychological mechanisms which heretofore have been crowded into the term "psychoneurosis." Heath and Powdermaker felt that if they could help these patients to "get a hold of themselves" physiologically, that is, alleviate the jitteriness, tremor, stomach tensions, appetite loss, tachycardia, pains in the head, perspiration, and insomnia which characterized the group, they could more easily overcome the psychological basis for the reaction and the patient would present a better prognosis. Their preliminary report involving 20 patients was favorable and, although they used what could be considered heroic dosage, no untoward reactions occurred.

As a result of these studies, it was decided at the neurosis hospital in the European theater in 1944 to try ergotamine tartrate, and a report of the original research by Lemkau and Sampliner(2) is in process for publication. Their conclusions on 14 cases were that ergotamine tartrate appeared more effective in relieving the symptoms of combat exhaustion than did good ward management and group psychotherapy alone, and it was their concept that the subjective feeling of tension as well as tremor were the symptoms most strikingly relieved by the drug. Again, in spite of the large doses, no really severe pathological reactions occurred, although one patient suffered an attack of syncope and many of their patients complained of pain in the legs, particularly a feeling of cramping or tightness about the adductor of the thighs. The authors also felt that ergotamine tartrate exerted a sedative action and that smaller doses of routine sedation were required.

Following this preliminary study, it was determined to carry out a major check upon the action of the drug when the neurosis hospital moved from England to Belgium. About this time, however, we received some correspondence from the Surgeon General's Office quoting a study of 16 patients carried out by Grinker in which 13 of the 16 developed toxic symptoms—that is, pains in the legs and arms—3 developed phlebitis, and in 2 actual thrombi occurred. Only 2 of these cases showed improvement in the tremors but reverted to their previous status when the drug was discontinued. No improvement in the symptoms of the sympathetic overactivity was observed in 10 patients. None of the benefited patients maintained improvement after the drug was discontinued. It was felt that ergotamine tartrate was too toxic to be safe and that the doses used were too large.

This dismal report may well have served to stymie further research on the subject except for the fact that the authors of the letter in conclusion further recommended that insulin had been found to be of some value in anxiety and as a sedative and further suggested that research be switched from ergot to insulin. In view of the fact that Grinker's findings were in complete contradistinction to the results not only of Heath and Powdermaker but of our own preliminary observations and secondly that the Sur-

[1] Read at the 103d annual meeting of The American Psychiatric Association, New York, N. Y., May 19-23, 1947.

From the Department of Neuropsychiatry of the Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, N. C.

geon's Office, as it not infrequently seemed, was completely at sea as regards certain types of research—for example, at this particular point we had already run nearly 15,000 cases of insulin of which they seemed totally unaware—it was concluded that the research on ergot should continue, provided, of course, adequate safeguards to protect the patient were applied.

The methods set up by Lemkau and Sampliner were followed in every respect. Patients were put upon treatment the day after admission to the hospital and were selected only to ensure that they demonstrated more or less true anxiety states as manifested by tension, feelings of tightness in the stomach, tremor, marked perspiration, and appetite loss. Histories were taken to eliminate those who had demonstrated long-standing neurotic symptoms, since it was our idea to test the efficacy of the ergot alkaloids only insofar as they produced changes upon the symptomatology of acute anxiety as precipitated in an otherwise previously normal individual by the stresses and strains of combat experience. The patients were given ergotamine tartrate or ergonovine maleate or lactose in 2-milligram capsules. The routine established was such that the first patient admitted received ergotamine, the next patient admitted received lactose as a control, and the next patient received ergonovine. The patients were simply arranged as they entered the wards and it was impossible for anyone except the administrator of the medicine to know who was receiving the drug or the placebo. No breaks in technique ever occurred and at no time did any patient know whether he was receiving the alkaloid or the lactose.

Patients were kept constantly on the ward so that they could be continuously under observation at all times. They ate as a group and were always accompanied by corpsmen who checked their behavior constantly. The usual routine of a standard overseas neurosis hospital was followed throughout with the exception that the patient was checked at frequent intervals for blood pressure and pulse determination and was given his drug at 0600, 0900, 1200, 1500, 1800, and 2100 hours daily. Dosage consisted of 2 milligrams per dose so that each patient received a daily total of 12 milligrams in 24 hours. This dosage was continued for 7 days.

In addition to the ergot alkaloids or placebo, each patient was offered a high caloric diet, group psychotherapy, group physiotherapy, medical and diagnostic procedures as indicated, and at night was given up to a grain and a half of sodium pentabarbital as a sedative if needed. Pulse and blood pressure recordings together with a careful check for complaints of pains or aches as well as observations of the lower extremities were made immediately following each period of medication. This routine is fairly complicated but as many as 30 patients can be checked at one time by two nurses who have been trained in the procedures. Following is a complete routine which takes the activities of the patient from 0545 through to 2130(3):

0545–0600	Awaken patients
0600–0615	Ergot medication
0615–0800	Personal hygiene—clean beds, etc.
0800–0830	Ergot medication—check pulse
0900–0930	Blood pressure recordings
1000–1015	Check pulse
1100–1115	Rest period
1115–1200	Lunch
1200–1230	Ergot medication—check pulse
1300–1330	Blood pressure recordings
1330–1400	Clean ward
1400-1415	Check pulse
1500–1530	Ergot medication
1600–1615	Check pulse
1700–1730	Blood pressure recordings
1730–1800	Supper
1800–1815	Ergot medication
2000–2030	Check pulse—nourishment
2030–2100	Ward fatigue
2100–2115	Ergot medication—sedation
2115–2130	Patients to bed
2130	Lights out

In this particular series, 59 cases of ergotamine tartrate are included, 37 cases of ergonovine maleate, and 36 cases of placebos (calcium lactate). A much larger series has been done—more than 100 in each grouping—but the records were destroyed when the hospital was forced to evacuate in the face of the German push through the Ardennes in 1945. There are slightly more ergotamine tartrate cases than any of the others because, when the hospital was reestablished, it was felt imperative to secure at least some data on the immediate cases which were coming

through and this drug was readily available. The background of the cases is remarkably similar. The bulk of the patients had had a grade school or less education, 13 of the ergotamine cases, 10 of the ergonovine, and 10 of the placebo cases having had a high school education. Distribution as far as military rank was essentially even, as was also history of previous wounds and army experience.

Results of the treatment indicate that, of the 59 ergotamine tartrate cases, 58 completed treatment, 19 or 32.2% showed marked improvement, sufficient to return them to combat status, 34 or 57.6% showed moderate improvement sufficient to return them to noncombat status, and 6 or 10.2% were evacuated including the one that was terminated. In the ergonovine group, 12 (32.4%) showed marked improvement, 21 (56.8%) moderate improvement, and 4 (10.8%) no improvement. Using the same routine but substituting calcium lactose for the ergot alkaloid, 7 (19.4%) showed marked improvement, 21 (58.3%) moderate improvement, and 8 (22.2%) showed no improvement with subsequent evacuation from the theater. As far as complications were concerned, those taking ergotamine tartrate showed 21 out of 59 (35.6%) demonstrating some sort of complaint. Tinglings as described by Heath and Powdermaker, together with occasional rare vasomotor flushings, were not noted. Fourteen of the cases showed pain and 6 showed cramping, a total of 20 in all who complained of pains and cramps in the lower extremities. These cramping sensations were usually either in the quadriceps or gastrocnemius muscles as found by Lemkau and Sampliner. One patient demonstrated a marked drop in blood pressure and the treatment was terminated.

With ergonovine, 19 of the 37 cases (51.4%) showed complications and of this group 5 showed pain and 12 showed cramps, 17 in all. Two patients exhibited a rare complication—atypical lymphadenitis together with the classical red streaks of infection stemming from their feet up their lower legs. Surgical examination indicated no evidence of foot infection and the drug was stopped. On cessation of the drug, the lymphangitis cleared and the drug was recommenced; 48 hours later both cases showed lymphangitis and on cessation of the drug the red streaks again vanished. This was repeated and again the red streaks appeared and disappeared as the drug was administered. The cases also showed a generalized lymphadenopathy but this was nonspecific in nature since 100 consecutive cases subsequently admitted to all wards of the hospital from the combat zones all demonstrated a marked lymphadenopathy. The placebo group occasionally complained of vague aches or pains but they were, of course, entirely different from the cramplike pains in the cases to whom ergot alkaloids had been administered.

These results are most interesting, as much from a therapeutic viewpoint as from a pharmacological standpoint. Therapeutically, it can be said that in cases with ergotamine tartrate or ergonovine maleate in massive doses do better than cases who received placebos of milk sugar. Actually they do best from a subjective point of view, but tumors, sweating, and irritability are also relieved. More cases improved with the alkaloids than with the lactose medication but the number of cases improved is not sufficiently high to merit the use of the drug except in specifically selected cases. There is no doubt, however, from a therapeutic point of view, that the preliminary observations of Heath and Powdermaker and of Lemkau and Sampliner have been verified and that the ergot alkaloids do act to combat the automatic stimulation resulting from acute anxiety. In selected cases these drugs may prove extremely useful.

This study also indicates that our pharmacological knowledge of ergot requires elaboration. In spite of the material which appears in our pharmacology texts, it is obvious that the dosages recommended are definitely under those which can be given. We must agree with Alvarez who states, in discussing the use of ergot alkaloids in the treatment of migraine, "Many physicians are, I feel sure, too fearful of this useful drug. I have little to fear of it because I have never seen or heard of any disaster due to its use in the treatment of attacks of headache. I have known many persons who, when I saw them, had been taking the drug three times a week for months without coming to any bad end. So far as I know, the only cases in which the drug injured the blood vessels of

the extremities have been those in which large doses have been given several times a day for the relief of jaundice." I am completely unable to explain Grinker's totally opposite findings and can only indicate that this series of cases plus the even larger number run but not reported indicate that the ergot alkaloids, if carefully administered, in selected subjects can be used in doses much larger than admitted by the books on pharmacology. Secondly, we are apparently not at all certain as to the basic action of these alkaloids or even the differences between ergotamine and ergonovine. Our texts lead us to believe that ergonovine yields less side effects and is more specifically oxytoxic in its action. Our results indicate that minor complications are much more common with this drug than with ergotamine. Certainly our findings emphasize the need for further clinical and pharmacological studies of these substances! Such studies may eventually yield information which will demonstrate the true value of these drugs in psychiatric therapy.

CONCLUSION

A report is made on 59 cases of acute anxiety treated with ergotamine tartrate, 37 cases treated with ergonovine maleate, and 36 cases treated as controls with calcium lactate. Results are given therapeutically and it is indicated that, while these drugs do act as antisympathetic compounds and to some degree ameliorate symptoms of jitteriness and tension, their potential hazard and the routine required for their administration is sufficiently complex to limit their use to special instances.

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DISCUSSION

PAUL V. LEMKAU, M. D. (Baltimore, Md.).—There are 2 points which I would like to stress in connection with Dr. Kelley's paper. The first of these concerns the procedure in the original evaluation of this drug which Sampliner and I made in England. In this experiment the cases were selected according to the criteria which Dr. Kelley has outlined. The cases were very similar to those originally described as suitable for treatment by Heath and Powdermaker except that we believe that they were more acute, although actual time relationships could not be made out in Heath's and Powdermaker's cases.

After the selection of the group of patients for the experiment, all were turned over to the nurse who assigned them alternately as treatment or control cases. In other words, physicians did not make the selection for fear that they would unconsciously select favorable cases for treatment and unfavorable cases for controls. As Dr. Kelley has stressed, the drug and the placebo lactose were administered in identical capsules and no break in technique occurred; that is, no patient knew whether he was getting the drug or a placebo. Except for physical activity, the program of the patients was the same as that for the general hospital population, including recreational activity, ample supplies of reading material, and a period of group psychotherapy classes each day.

As Dr. Kelley has pointed out, the symptoms which appeared to be most strongly affected by ergotamine tartrate in the dosages given were (1) tremor and (2) restlessness, both the subjective feeling of restlessness and the tense, restless mobility about the ward. Patients on ergotamine were able to lie down and rest; patients on placebo continued to pace, shift from one activity to another, etc. The principal side effect noted was pain in the legs. This pain was distributed primarily in 2 muscle groups, the adductors of the thigh and the gastrocnemius group. The patients usually described this as a tight feeling and I believe that there was actually muscle spasm in these groups, by palpation. As these patients described their feelings, one could almost see the scissors-gaited spastic walking on his toes.

Considering the fact that tremor was affected and that particular muscle groups became hypertonic, I was forced to consider that we may have in ergotamine a central effect which previously has not been described. This effect would have to be, of course, from our results, in the primitive motor systems. This is purely a hypothesis and strongly indicates the need already referred to by Dr. Kelley for further pharmacological study on ergotamine tartrate.

Although, as Dr. Kelley has pointed out, ergotamine tartrate has been a safe drug in our hands, I believe it should be made clear that the patients we were dealing with were, with the exception of a few cases, in excellent general physical condition. It seems wise to point out that a drug which would be safe given to healthy, young men might

be dangerous if administered to debilitated older people. We have no evidence on this point, but I believe that it would be unwise to leave off very careful observation of patients in dealing with ergot drugs, for fear that they will be unjustly damned before tests can be completed.

HYMAN CHARTOCK, M. D. (New York, N. Y.).—I am most grateful to learn that both Dr. Kelley and Dr. Lemkau have done work with ergotamine tartrate. When I read the original paper by Heath and Powdermaker in 1944, I was in charge of the psychotic section at Valley Forge General Hospital. I wondered whether it might not prove beneficial in extreme anxieties and also anxieties associated with psychosis. Since then I have been accumulating my material for publication. I have continued prescribing it since my return to private practice.

My dosage is 2 mgms every 3 hours for a total of 80 mgms per course. The patients averaged 8 mgms per day since I felt that sleep was more important than medication in these cases. I warn all patients to watch for nausea or ringing in the ears. If either occurs they are instructed to miss a dose, permitting a lapse of 6 hours. If either symptoms returns, the medication is discontinued. Thus far no one has complained of the usual signs of toxicity as aches in the legs. The majority of my patients who have used it have been greatly benefited. Some had it discontinued because of persistent toxic signs. A few failed to respond.

I did not attempt a true experimental test with the use of placebos because I was more interested in improvement than in the efficacy of the drug as compared to placebos. I felt that there had been many other anxieties in which the drug had not been used to use for comparison. I hope to finish my paper and have it ready for publication at an early date. I had been searching diligently for further work upon it, and the papers of Drs. Kelley and Lemkau are the answer. I am grateful to them.

PRELIMINARY REPORT OF AN EXPERIENCE IN THE GROUP PSYCHOTHERAPY OF SCHIZOPHRENICS [1]

JOSEPH ABRAHAMS, M. D.

This is a brief, preliminary report and discussion of the rôle of leadership and other dynamic factors in the organization and therapeutic procedures of a group of psychotics. The admitting ward for colored patients of Howard Hall, the maximum security section of St. Elizabeths Hospital, was selected for this experiment in group psychotherapy in October, 1946. It contained 25 patients, of whom 8 were diagnosed as paranoid schizophrenia, 4 catatonic schizophrenia, 2 psychosis with cerebral arteriosclerosis, 2 psychosis with epilepsy, 7 mixed schizophrenia, and 2 general paresis. Eighteen were criminals, of whom 5 were murderers. The remainder of these patients had been transferred to Howard Hall because of their destructive and assaultive behavior in other parts of the hospital. Seven of the patients had been hospitalized from 6 months to 1 year, 12 from 1 to 5 years, and 6 over 5 years and up to 23 years.

Their life on the ward was essentially the same as on any chronic ward except that their destructiveness increased the security measures and prevented adequate recreational therapy. They generally kept to themselves, but assaults were relatively frequent. As a result of the extremely dangerous nature of their assaultiveness, security provisions on the part of the personnel were a prime consideration.

Survey of the ward from a sociological viewpoint revealed a society marked by a series of hierarchical, repressive relationships. Coupled with this was an intense struggle for dominance, approval, and the amenities of living. The incongruities and inconsistencies in our modern social and cultural patterns were present in full force. The ward atmosphere was one of social isolation, boredom, and recrimination, with tempers flaring with lightning rapidity and violence.

The psychotic patient living in this atmosphere suffered gradual intensification of his autistic defenses against anxiety and tended to retreat further into a more regressed and dilapidated state.

After the preliminary survey of the ward, the writer became part of it for an hour, daily, in the rôle best described as therapist-leader-participant-observer. He set himself the task of getting the members of the group to look at themselves and each other as he regarded them—in an acceptant, helpful, understanding manner. Through example, he aimed at establishment of a therapeutic group atmosphere, with the patients, as well as himself, as therapeutic instruments, helping and motivating one another, and utilizing the insight that only a schizophrenic can have into another schizophrenic's illness.

Illustration of Approach

The patients' rôles as therapeutic instruments involved the bringing to awareness, through the patient-to-patient interaction, as much as possible of the nature of their relationships—to help each other attain the insight and change needed to get along better in the group and then in the outside world.

The first group session was begun by casually sitting down at one end of the dayroom and speaking to two patients, Brown and Black, on how they were getting along. They asked the doctor to take their wristlets off. The doctor suggested that the problem be discussed with the entire ward group. They said they didn't care how it was done. Twelve patients were assembled by Brown and Black and the doctor explained to them that they were gathered to talk over problems on the ward, one of them being the wristlets on Black and Brown.

Five patients showed overt interest. The others sat staring blankly ahead. The doctor asked the group how Brown could have his wristlets removed. They stated that it was up to the doctor. Brown launched into a long tirade on how he did not mean to do anyone harm—it was just a result of their bothering him. The doctor asked the group what Brown did when he had the wristlets off. Green stated that Brown was all right, just a little nervous, and that he had a good heart, watching after a blind old man on the ward. Five members of the group agreed. Brown delivered a long tirade

[1] Read at the 103d annual meeting of The American Psychiatric Association, New York, N. Y., May 19-23, 1947.

From St. Elizabeths Hospital, Washington, D. C.

on the injustice of the wristlets. The group became restless.

The doctor then enacted a scene with a patient, Blue, in which the doctor took the part of an irresponsible offender of Brown, and Blue took Brown's rôle. The group showed increasing interest in this, and several members offered suggestions as to the probable behavior of Brown. Brown strongly rejected the formulations advanced by the group, to the effect that any patient could get Brown violent in his present condition.

The active members of the group turned to another subject at this moment—how to get out of Howard Hall. The doctor asked the group how many members wanted to talk about this. All raised their hands. The doctor suggested it as the topic for the next hour's conversation, explaining that he would be back the next day after lunch, and saying that he had enjoyed the conversation.

The next nine sessions were largely on the same order as the first. The doctor, feeling his way cautiously and empathically, nevertheless played an active rôle. The group members related themselves chiefly to the doctor, who set the tone of the group's discussion, utilizing the verbal and nonverbal material of the group. There was increasing display of open hostility on the part of the patients toward the doctor and each other as their barriers of isolation were lowered. However, the object of attaining a "we" consciousness was gradually attained. The members addressed "the group," and said "we" and "us" frequently.

In the tenth session, the group was occupied almost exclusively with the problem of the recreational material and literacy class, which members had asked for. It grappled with the problem of responsibility for the property, and came up with the selection by majority vote of White and Rich as the leaders and custodians of the recreational material which had been supplied by the Red Cross. They selected Land, a hebephrenic patient, as a literacy class instructor.

In the discussion of the custody of the games, White stated that he didn't want the job if someone was going to claim that the games belonged to him (referring to Black and Green who had delusions involving possession of the hospital as God and the President, respectively). The doctor threw the question to the group for exploration and decision.

The group agreed that it required decision. The doctor waited. Black spoke up, "They're meaning me, I know." He launched into a recitation of his delusion system. The doctor reviewed the experience of the group with each of the members who had delusions, making extended reference to the findings it had made with Green (of his assumption of the rôle of President, "of making my feelings big, to make myself feel better about losing my freedom and pussy"). The group listened patiently to Black and agreed with the doctor that it was necessary to find "what was eating him." The doctor asked, in the name of the group, "Mr. Black, what is eating you? What happened to you to make you have to feel you are God?"

Black replied that his mother died when he was very small, and he was raised by his great aunt. He stated sadly and with a great deal of anxiety that he was "beat very bad when I was small, and I had to work when I was little, and I owns this hospital and all this country." The doctor asked the group what it believed caused Black to jump from what he was talking about to talking about how he was God, and said, "Perhaps it was too rough for him to talk about his earlier life." The doctor asked Black if he minded talking about his earlier life. Black stated, "No, I was beat bad when I was a child," and launched into his delusionary system again. The group listened patiently for five minutes, except for a new member, Head, who laughed. The doctor reminded Head that the group had long ago decided to listen, even when it sounded unusual, and try to understand it and to respect one another in the group. Head assented.

The doctor asked Black if he would continue. Black smiled and returned to a painful recital of his childhood experiences—"beating me"—and then blandly to his delusional system. White became restive and asked the doctor about the games, whether Black would want to take possession of them. Black became hostile, stood up, and notified the group that if it did not want to accept his idea that he was God, he would have to leave it. The members shrugged their shoulders, and Black left, lingering on the periphery, with his back to the group.

The group continued with the discussion of the recreational material, interrupted by Green, who wanted the doctor to settle the question of his payroll. The doctor opened the question for group discussion. Green showed reluctance to let the group in on it. The hour was ended by this time and the members indicated their pleasure with the hour's proceedings. As he left the ward, the doctor noticed White with his arm around Black's shoulder.

As a leader in this schizophrenic society, the doctor had to be constantly aware of the intense struggle by group members for acceptance and recognition, at first by the doctor and then by each other. He had to be unremitting in his efforts to understand the underlying meaning of the psychotic behavior, not only in terms of what was said but also in terms of social relationship—their asking for attention, evidence of understanding, approval, recognition from one another, and the testing of the group's reactions toward each other.

Without this constant awareness and search for the meaning of the psychotic mechanisms in terms of the patient's inter-

personal security and satisfaction, the doctor would soon lose his bearings in the raging turmoil of emotion in a group of schizophrenics, especially in its initial phase. The doctor sought to be an acutely aware observer, chiefly for the purpose of more effectively participating. It was through his participation in this schizophrenic society that the group mores changed and the therapeutic atmosphere began to develop. The members of the group soon found that the doctor respected each member regardless of his behavior. He listened to the patient without interrupting him, and asked the patient's permission when giving his opinion. He gave his undivided attention to the problems presented by the group collectively and individually.

The writer found it necessary to be extremely active in the initial phase of the group. He had to attend to the psychological needs of many patients clamoring for attention at one time. He had to protect members from the verbalized hostility of the group, and also absorb the hostility of individual members toward the group so as to protect their fragile society. He protected them from this unbearable hostility when one member would attack another, interposing such a statement as, "Remember what Mr. Green said about throwing gasoline on the fire? Is this more gasoline?" or "Let's look at what's happening here between Mr. Brown and Mr. Smith. What is Mr. Brown trying to do to Mr. Smith?"

The Rôle of Leadership

The writer during the initial phase of the group was looked upon as a representative of authority in addition to being the helpful leader. Gradually, however, as the group members' self-esteem rose, and the doctor's rôle as a participant observer became clearer, they increasingly accepted him as a fellow-member of the group, albeit an expert one. As they formed their working relationships with the doctor, some taking days, and others weeks, during which some degree of mutual understanding and communication developed, they began carrying over this mode of relating to him, to each other. The atmosphere necessary for deep therapy was achieved when the group came to the conclusion that they wanted to listen to one another without showing disrespect in any of the infinite number of ways possible, that they wanted to try to understand the other fellow, and through that understanding try to help him achieve his goals.

From that beginning, it was but a short step to the dynamic way of thinking—in fact, the writer found that the schizophrenic naturally takes to the dynamic way of thinking when in a therapeutic atmosphere.

The leader sought to help the group examine the nature of the members' relationships to each other in order to heighten their awareness of them. Then, through the medium of the therapeutic atmosphere of acceptance and patience, he and the group attempted to aid the members to uncover the experiences associated with their anxieties, not for the sake of information but for insight and an opportunity to abreact.

As the group continued, the members became increasingly quiet and cooperative. They showed increasing ability to endure reality without recourse to psychotic mechanisms. The immediate reward of group acceptance and approval was important in bringing this about.

Some Tangible Results

The development of a "we" consciousness was accompanied by the development of the therapeutic group mores as described previously. Rudimentary group institutions were evolved through the arrangements for custody of their recreational material, which the group cared for scrupulously.

The ward attendants were deeply concerned during the first month of group therapy by the constant loud talking in contrast to the usual silent, isolated behavior of the patients. At the start, some members, when asked to mop the floors, would defer the activity on the plea that they had to refer it to the group. Even more important, attendants felt that the doctor-patient relationship was a threat to their power and prestige. This resulted in a great deal of strain which was shown by the attendants' attempts to break up the group by derogatory remarks and by manipulation of members. However, as the progress of the group in attaining more adequate relationships with

each other resulted in a more orderly, quiet, and cooperative ward, there was a lessening of fear and insecurity on the part of the attendants.

By the end of the forty-first hour of therapy, sufficient progress had been made in the establishment of a group atmosphere conducive to an understanding of the nature of the members' psychotic defenses and the facing of some of the tremendous anxiety behind them. The relationships were clear and, in their working out, progress became apparent.

In the beginning of the forty-second hour, Brown sprang to his feet and cried, "What do you mean by having our sourness from birth come out, so that society should not want to have anything to do with us? Are you an F.B.I. agent, getting things on us?" White held up his hand and stated, "He's doing this to have us understand ourselves, Brown, so that we can change our ways." Rich and House vocally agreed. Black spontaneously at this point remarked, "My wife was playing with back door men," and volunteered further details. The doctor asked why he smiled during his recital of something which hurt him so much, if "it was out of the pain of his heart," (a statement made by a member of the group in another session). He replied, "Yes, doctor, from the pain in my heart."

Brown stated, "When my old woman did me dirt, and like Black, I got mad, but I tried to get away, far away. He should have left her like I did. You know, Doc, I want to ask the group and you what this means. Last night I saw you, and you were in my room, but I knowed you were not there at that time, you were in bed. You were going about your business in the group and later asked me to come to the group to get help, and I wanted help, and I wanted to tell you to go to hell, like I told the group many times before. But I didn't, and I told you I wanted help. What do that mean?"

The doctor turned to the group and asked if any of the members had experienced anything like that at night. White raised his hand and said, "Doc, I believe his mind was so full of the group that he imagined it." The doctor turned to Green and asked, "Mr. Green, remember what you said in the group the other day about how at night you were having a fight between the white folks who were telling you those big ideas about yourself, and the colored people who said you should be just yourself, plain Green?"

Green turned to the group, smiled, and said, "Yes, I gets awful tired of having that fight in myself all day and at night have it come all over again, and I gets no satisfaction." White stated at this point that when he was half asleep he saw and danced with a woman, "And maybe Brown was half asleep when he saw you, doctor." Brown replied, "No, I was wide awake." The doctor asked Brown if he, the doctor, appeared pleasant during that episode last night. Brown stated, "Like I said, kindness and respect is the way to treat children and sick people, and you were kind to me."

The doctor asked Brown if he wanted to join with the group in figuring out "how people saw things which weren't there." Brown vigorously nodded his head in assent. The hour continued with a discussion of the emotional needs of the member relating to hallucinatory experiences, and ended with the group deciding to discuss the sort of things which made people feel bad when they were younger. At the end, Brown said, "Nobody feeling bad here, is there?" and several members joined in with "No, siree!"

In the forty-sixth hour Green looked depressed and stated, "I know what Black was talking about when he said he owns all that land, from sea to sea, and all that cattle. He was just hurting so bad that he had to have some satisfaction from life, so he fools himself. I believe Brown was right about that with Black. I've been figuring it out. It's like when a patient is locked in his room, and he has nothing to do at night. He does the same thing day after day, and nothing new, and it wears on him, and he gets all confused. He has none of the satisfactions, the love he had before when he was free, and he has only himself, and he wants some love, and he feels that nobody cares for him. When he's all alone at night he has nothing to do but think, and he thinks hard, he thinks 'If I was only a movie actor, I'd have a gal like Ella Fitzgerald, or Betty Grable, and I'd have some love and affection, and I'd be happy,' so he tells himself he's the husband of Betty Grable, and he's on top of the world, but he's only fooling himself that he's all right, and he sings and dances, and makes a lot of noise and it only means that he's melancholy and sad, and has nothing, and is only fooling himself. He fools himself that he has a lot of power and can do things. But it does no good 'cause he's only fooling himself, playing the fool."

There was a pause of about a minute of tense silence. Then the doctor asked the group if there were any other ways a man could fool himself when he was in a room—sad and lonely. Head, an extremely boastful patient, raised his hand and stated, "When he's that way he can tell himself that he has a lot of ability that he really hasn't, that he's smart." Green stated, "That's right, and I know it's so. It seems to me that I've been fooling myself. I've been living in two worlds, the world of reality, like we're here, and the world of fooling myself, and fantasy."

The group smiled elatedly at this. Green continued, "I've got to stop fooling myself." There was a meaningful pause, and the therapist and the group congratulated Green on his coming to the world of reality, and suggested ways they and he could help make that world worth while to him. The hour ended on an optimistic, evangelical note.

The following group sessions (at present at 110 hours) have been characterized by group interaction of a nature similar to the forty-second hour, with an increasing sense of understanding and helpfulness. Chronic,

isolated, paranoid schizophrenics of many years' standing have shown, in several months, therapeutic change in the decreased use of their delusionary systems, the increase in the open frank statement of real feeling, and their more friendly behavior on the ward. A recently admitted mute catatonic patient, subjected to the group atmosphere, showed active interest in the group in a week, made a written communication in 4 weeks, and talked in 5 weeks.

Discussion and Summary

This experience may be discussed in the following terms:

1. It demonstrates that schizophrenic individuals can be led into psychotherapeutically effective relationships with each other in a group setting, through the exercise of a special type of group leadership.

2. The establishment of a therapeutic atmosphere in this type of group is marked by the gradual spread of a way of behaving or group mores accepted by all the members, of helpfulness, acceptance, awareness, and a desire for understanding of the other patients' problems, and, through that, to understanding of their own.

3. This atmosphere is established through the leadership of the doctor working through example and by the adoption by the patient, in his relationships with other patients, of the doctor's way of relating to him. The doctor needs to be as aware as possible of the dynamics of the group as a whole and of members to each other and to the group. He needs to be ready when necessary to protect the individual patient and the group from the impact of the intense emotion associated with the deep-seated disturbance of the psychotic.

4. The ability of one schizophrenic to understand another's defenses against anxiety results, in this therapeutic atmosphere, in the bringing to awareness of the meaning of their interpersonal relationships and the uncovering of earlier experiences associated with the patient's anxieties.

5. The therapeutic process resulted at first in an increase in hostile, depressed, and manic-like reactions, but, within a few months, there was established a gradual amelioration of the patients' social isolation, boredom, recrimination, and combativeness, and the substitution of a more cooperative atmosphere. The individuals also showed their improvement by an increasing ability to tolerate reality without recourse to psychotic defenses.

GROUP PSYCHOTHERAPY IN VETERANS ADMINISTRATION HOSPITALS [1]

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Group psychotherapy became a necessity at the Veterans Administration hospitals, as in the Army and Navy, because of the scarcity of psychiatrists and the increasing number of admissions. The present paper discusses the varying techniques of psychiatrists in 2 of the V. A. hospitals as well as the different groups of patients being treated.

A. Types of Patients

1. *Psychoneurotic and Characterological Disorders.*—This category comprises patients who are treated very shortly after admission and another group of patients who have been hospitalized for varying periods owing to the chronicity of their disorders. They are fully accessible and in good contact with reality.

2. *Psychotic Patients.*—These include 3 groups: patients receiving electric shock treatment, patients on insulin coma treatment, and those who are on "special observation." These subdivisions were necessary because of the varying degrees of patients' accessibility and because of differing severity of their psychoses.

3. *Mixed Psychoneurotic and Psychotic Patients.*—The first group, chronic alcoholics, is made up of all patients having excessive alcoholic indulgence as a prominent symptom, regardless of diagnosis. The second group consists of patients on the colored ward of one of the hospitals. These patients manifest various types of mental disorders but in the main can establish satisfactory rapport. The third is a convalescent group of psychotic and psychoneurotic patients who are on the threshold of discharge from the hospital. These patients have already achieved maximum benefits from their hospitalization in regard to their illness. In their treatment, in contrast to that of other patients in the hospital, the primary concern is with extrapsychic and not intrapsychic problems.

B. Approaches to Group Therapy

1. *Passive Nondirectional.*—This approach is used in one of the psychoneurotic and in the alcoholic groups. Here the therapist assumes a passive but alert attitude allowing for spontaneous and free expression of the patients. The patients themselves direct the discussion without any active participation of the therapist except for those occasions when an impasse is reached or when the material needs interpretation.

2. *Active Nondirectional.*—This technique is used in the groups receiving electric shock treatment and newly admitted psychoneurotic patients. The therapist participates actively in the discussion by frequently interpreting and explaining the material presented. He does not attempt at any time to lead the discussion into definite paths or channels nor to influence the topical content.

3. *Active and Semidirectional.*—In this technique the patients suggest the topics of discussion. The therapist selects the most appropriate one. The discussion then takes place with contributions from the patients. The relevant material is stressed and developed and irrelevant productions are rejected and disapproved. The therapist maintains a major rôle stimulating the patients and guiding their discussions.

4. *Active Directional.*—With the insulin patients both the subjects to be discussed and

[1] Read at the 103d annual meeting of The American Psychiatric Association, New York, N. Y., May 19-23, 1947.

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the direction of development must be largely regulated by the therapist.

5. *The Didactic Approach.*—This method, consisting of talks or lectures delivered to the patients by the therapist, was abandoned because of its ineffectiveness.

6. *Semistructured.*—The psychodrama group is differently structured than the other types and is discussed in detail later.

C. Description of the Groups

1. *Psychoneurotic Patients.*—The group therapy with the newly admitted patients is generally complementary to individual therapy, depending upon individual needs. The group structure remains relatively constant: a patient, after joining, stays with the same group even if he is transferred to another ward. New patients are added to an already functioning group. Should the number of the participants in one group reach more than 20, the group is divided into two parallel sections.

A patient is encouraged to bring his problems before the group. One patient's initiative encourages another to reveal himself. Through these "public" self-revelations a man is stimulated to step out of his "isolation"; he becomes aware of the universality of certain human problems, fears, and reactions, thereby acquiring some degree of tolerance and charity toward himself and his symptoms.

Often the problems discussed by the group are further developed during the individual psychotherapeutic interviews, and the group-plus-individual approach is more productive and effective than either method alone.

Patients are permitted and encouraged to air objections and resentments concerning their experiences in the hospital, during "gripe sessions." It gives them their first organized emotional outlet, thereby contributing to the formation of a collective psyche which is the primary foundation of all future group psychotherapeutic efforts. Their criticisms are investigated and justified ones are corrected; those which are primarily emotionally determined are exposed as such. The developing group psyche makes itself felt from the very first session.

Each session deals with the actual problems the patients present. Opinions concerning the possible origin and meaning of symptoms are encouraged. Thus each session becomes an occasion for emotional outlet as well as an opportunity to take conscious inventory of assets and available ways and means to face problems.

A secondary function of these sessions is to instruct patients about the nature and importance of other hospital activities. Representatives of these departments (occupational therapy, vocational guidance, etc.) are invited to discuss these problems with the patients. Group therapy does not end with the discussion sessions. The entire day's activities are planned in advance for each participant in the group, the central feature being the group psychotherapeutic session.

2. *Electric Shock Patients.*—In addition to providing a degree of insight such that the psychotic episode will not stand entirely apart from the main stream of a patient's life experience, group psychotherapy enables the patients to discuss in detail the nature, purpose, and effects of electric convulsive therapy. It also provides a very healthy object for identification with the "recovered" patients who are continually being discharged. Attendance of patients at the meetings, which are held twice weekly, is obligatory. With this type patient only a certain degree of freedom can be allowed, for otherwise the subject tends to become so confused as to serve no purpose.

As in the psychoneurotic group, a complete program has been worked out for every patient which includes occupational therapy, athletics, organized recreation, etc. The men function as a group throughout the entire day.

Although the partial memory defect resulting from the electric shock is fairly pronounced in some patients, there has been found to be sufficient retention not to interfere too seriously with this type of treatment.

3. *Insulin Coma Patients.*— It was essential to establish a separate group for the insulin patients because of the more severe disintegration and disorganization of their ego structures and their relative emotional poverty.

Meetings are held only once a week within 2½ hours of termination of treatment and it

has been found wise to take the patients off the ward to new surroundings (*i.e.*, a quonset hut). The insulin group more than any of the others is in need of "directional" approach. Early attempts at allowing patients to explore the psychotic content or psychodynamics ended disastrously because a patient would often enter wholeheartedly into the delusional material of another patient or relate the discussion entirely to his own personality, resulting in a great deal of confusion. The most practical approach at present seems to be to announce the subject such as "What takes place during insulin treatment," "What types of treatment do you receive in the hospital?", "In what respects does mental disease resemble childhood?", and other subjects of concrete nature. Discussions are kept relatively superficial.

To our great satisfaction, the inclusion of withdrawn, catatonic, and mute patients proved justified since, when partially mobilized while coming out of insulin coma or after "recovery," they gave evidence of having not only been aware, but of having profited by the opportunity of entering into a relatively normal mental and emotional relationship with others. This in fact seems to be the main value of group therapy with insulin patients.

4. *Special Observation.*—The group is composed of improved patients who were formerly acutely disturbed and patients in various degrees of depression. The subjects discussed are essentially those chosen on the convalescent ward, *i.e.*, mental health and mental illness, education, society, family.

5. *Alcoholics.*—With alcoholic patients an attempt is made to use a modified type of group therapy. Meetings are held three times weekly and are open to all alcoholic patients of the hospital. Attendance is strictly on a voluntary basis; it includes all types of cases (chronic alcoholics, psychopaths, schizophrenics, manic-depressives, etc.) in whom alcoholism is a prominent symptom. The main topics of the discussion are alcoholism, what constitutes an alcoholic, the treatment available, conditioned reflex and insulin subshock treatments, the effects of alcohol on the organism. The therapist assumes a more didactic rôle than in the other groups.

6. *Colored.*—On the colored ward of the Maryland hospital, group therapy is used with a heterogeneous group of patients. Generally the educational level of the patients is low and they are mainly interested in discussing simple, practical problems. At first a few didactic talks were given about mental illness and the necessity for hospitalizing and treating psychotic patients. The group was shown grossly psychotic behavior. Patients with catatonic stupors were presented to impress the group with the necessity for hospital care. Other problems discussed have reference to marriage, relations with in-laws, rôle and effect of children on the parents, housing problems.

7. *Convalescent.*—At one of the hospitals didactic lectures were at first given to 50 patients at a time. It was felt that the contact was too superficial, and in order to obviate this difficulty the patients were broken up into subgroups of 4 to 6 patients. The members of the groups were asked to question each other on symptoms and history prior to admission and apply some of the knowledge or insight they had gained from the previous talks. The groups were finally merged into one single group.

Different general subjects were discussed and one subject, such as that of "education" or "society," sometimes ran for 10 or 15 weeks. Selection of the patients was based on cooperation, interest, and a basic minimum required grasp of reality, although some patients, meeting this requirement, were actively hallucinating.

8. *Psychodrama.*—Psychodrama was started in July 1946 as a means of extramural reality-adjustment rather than individual "deep" therapy. Situations were designed to anticipate actual (extrapsychic) problems which might be faced by the patients after discharge, rather than, as the other group therapies, attacking primarily intrapsychic problems. Psychodrama provides an opportunity for meeting these situations in a protected environment where penalty for failure is minimal. Criticism is constructive and opportunity to compensate for unsuccessful solution by later trial is provided.

Originally patients in all diagnostic categories were selected, but experience has shown that admission should be restricted

to those whose discharge from the hospital is imminent and with the anticipation of "normal" adjustment. Since the entire series occupies only 8 meetings no new patients are admitted once the series has begun.

The psychodramatic session consists of placing the patient in a partially structured situation and allowing him to "work it through." For instance, the patient is told he is applying for a job. One of the staff members plays the part of the prospective employer and a realistic interview is carried out with stress being laid on how the patient accounts for his mental hospitalization. Other problems such as dealing with inquisitive neighbors, difficult in-laws, etc., are presented. The purpose of psychodrama is explained to the patients thus: 1. It raises selected problems that most of them will have to face. 2. It suggests possible solutions. 3. It allows the patient to work out his own solution. 4. It permits criticism of his solution in the protective aura of the hospital where possible errors or failures are much less traumatic than they would be in the actual situation. Handling the three groups of patients, insulin, electric shock, psychoneurotic and convalescent, is in many respects like handling children of different age levels. With the insulin patients (as a rule, severely disorganized schizophrenics) there is not much understanding of dynamics; and the therapist, as a father-surrogate, must assume a rather fixed and authoritative position. With the electric shock patients (because they include manic-depressives, reactive depressions, involutional depressions, and less severely disorganized schizophrenics) the rôle of the therapist need not be so rigid. With the psychoneurotics an "older brother" rôle is often played by the therapist.

D. Objectives

In general the objectives of all group psychotherapy may be summed up as follows:

1. The creation and fostering of healthy emotional attitudes.
2. Adequate intellectual insight.
3. Understanding of symptoms in the perspective of all universal suffering.
4. The liberation and adequate rechannelization of the patient's psychosomatically displaced energies.
5. Acceptance of long-term goals by focusing more on the future than on the past or present.
6. Development of potentialities and utilization of assets.
7. Preparation of the patient to resume a rôle as an adequate and reasonably satisfied member of society.

E. Dynamics

1. Purely practical problems are worked out through group discussion.
2. With the severely psychotic patients in the insulin group there is a coercion which forces the patient to think and behave productively and rationally instead of pathologically and destructively.
3. Insight into a patient's own problems is often achieved by recognizing similar problems in others.
4. By the presentation of specific extramural life problems the patient's ego is prepared and strengthened.
5. Circumstances are created that permit group socialization so that an individual patient functions as a member of a community, which censures atypical behavior, and provides certain objectives through *esprit de corps.*
6. Pathological energies are utilized by channelization into socially acceptable diversified activities. Much of this is done through occupational therapy, physical therapy, etc., and theoretical "insight" is often achieved in the group sessions.
7. The expression of a forward looking attitude with deliberate mobilization of assets is encouraged.
8. There is a relief of the feeling of isolation by social interaction so the man no longer feels, "I am alone."
9. A desirable leader is provided toward whom the patient can "transfer."
10. Group therapy provides: the ventilation, catharsis of emotional problems (except for the insulin patients), and "gripe sessions" with observable results; the release of hostility in a socially acceptable form; the relief of guilt by confession, and reassurance by comparison with the confessions of others.
11. The symbolic expression of a family constellation provides the opportunity of

"working through" unresolved conflicts arising in this area.

12. Through the intensification of possible doubts of the patient as to his pathological symptomology and through criticism and comment of the other participants, progress is made toward discarding delusions and pathological attitudes. Criticisms coming from ward mates often are more emphatic and effective than those originating with the psychiatrist.

F. Results

Without the use of paired controls or other equally reliable criteria impressions as to results must remain subjective. Comparison of discharge rates before and after the institution of group psychotherapy provides only a crude index of the value of the treatment and cannot properly be subjected to statistical treatment. Review of this method has shown that at present there is shorter duration of hospitalization than formerly. The method of paired controls is actually being used on the psychodrama group but it will be another year before results can be evaluated. Most of the ward surgeons in both hospitals feel that patients are progressing more rapidly than formerly, and certainly almost without exception the patients themselves feel they are being greatly helped.

GROUP PSYCHOTHERAPY WITH PATIENTS' RELATIVES [1]

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Every psychiatrist is aware of the obstacles to successful treatment provided by the so-called healthy relatives of the one who is considered sick. It is surprising, therefore, that more efforts have not been made to round out the treatment of patients by concurrent treatment of relatives, especially since group psychotherapy has been in wide use. Lectures to relatives, as initiated by Marsh at Worcester(1), and as carried on by Low through Recovery, Inc.(2), were steps in this direction. Mothers of children under treatment have been the subject for other experiments by Amster(3), Durkin, Glatzer, and Hirsch(4), and Lowrey(5). However not much has been reported so far on the ventilative treatment of relatives of adult patients while the patients are being treated. A project along these lines was started last August at the Allan Memorial Institute of Psychiatry, at the suggestion of the director, and as an extension of the psychotherapy groups for neurotic and mildly psychotic patients which were already in operation under the leaderships of Dr. Prados and other members of the staff.

Weekly discussion meetings have been conducted, of one hour duration, to which members of the immediate families of patients come in response to an open invitation issued during visiting hours. In addition certain relatives were specially requested to attend by the registrar, when he had met them and sized up the interpersonal problems at the time the patient was admitted to the Institute. Other relatives or intimate friends were invited by the doctor carrying out investigation or treatment, by social service workers, or at the suggestion of the director during the ward round case discussions. Attendance at individual meetings has varied from 4 to 30 persons. There were small numbers in attendance when the meetings were held in the afternoon and larger numbers when they were changed to an evening and the motivation added of an extra visiting hour afterwards for those in attendance. This motivation did not attract relatives with strong hostility to the patient or strong resistances to recognizing their share in the problem of the illness, but such individuals would have provided stony ground for psychotherapeutic growth.

New relatives joined the group each week and others dropped out, so that the group involved a continually changing composition with considerable continuity. Some relatives came only once. Others continued to come for weeks after their patient had been discharged from hospital. Some were attending the group while their patient was enrolled in the Day Ward(6) and participating at the same time in both home and hospital environments. Each newcomer was given a mimeographed circular for orientation, and the first few minutes of each session were taken up with a review of the purposes of the meetings. The invitation to attend and the explanatory remarks were couched in such terms that the relatives were asked to participate as members of the team which was seeking to readjust the conditions leading to the psychiatric problem. They were not told that they themselves were being subjected to psychotherapy, although many of them became aware that they were deriving emotional benefit from their participation.

The technique followed was midway between repressive-inspirational and analytic methods. Each session was started with a short, didactic talk on psychobiological fundamentals and on some psychodynamics of interpersonal relationships. Then questions were asked by the group leader to promote discussion within the group. Considerable use was made of the blackboard to illustrate explanations and to bring discussions into focus. Questions were encouraged from the group in order to facilitate discussion; but technical questions were answered as briefly as possible and in the case of relatives of psychotic patients they were often urged to read Edith Stern's helpful little

[1] Read at the 103d annual meeting of The American Psychiatric Association, New York, N. Y., May 19-23, 1947.

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book(7). Questions on interpersonal relations were directed back to others in the group to ensure active participation. Care had to be taken to avoid degeneration of the session into an "information please" program, since questioning of the leader seemed to be a prominent form of resistance, and the resistance problem seemed greater than it usually is in either individual or group psychotherapy with patients. It was necessary to be aggressive enough to draw attention to the relatives' roles in psychiatric illness and yet tactful enough to avoid hostility or guilt reactions which might lead to failure to attend the group or inability to relate the discussion to the problem of their own patient.

The introductory explanations covered topics such as the essential psychosomatic unity of the human organism and the combination of physical and psychological treatment methods available. The relationships of the person to the environment were pointed out, especially the interpersonal relationships within the family. The team character of modern medicine and psychiatry was stressed and the idea that the relatives could play a part in this teamwork was linked up with their position as part of the patients' home environment. The problem of a psychiatrically ill individual was emphasized as a problem of maladjustment within the group which would be likely to recur unless factors in the environment were changed in addition to whatever change might be brought about for the sick person by hospital treatment. An appeal was made for constructive thought and discussion on the factors that might have been contributing to the illness.

It was emphasized that neither fault finding nor guilty remorse were constructive approaches. Explanations of the illness were not considered helpful if they involved blaming the patient or dwelling on self-accusation without considering how to alter the situation. Nor was it considered valuable to reiterate, in terms of what the patient "should have done," opinions which had been held previous to the development of the illness and which had obviously not prevented it. Every encouragement was given to the trial of a new approach by the relatives which might produce a more healthy reaction in the patient.

Following such orientational remarks the group discussion was directed into consideration of parent-child relationships, of intramarital hostilities, of sibling rivalries, of dependence-independence conflicts, of conflicts between different concepts of their relative roles held by different members of the family, and of the obstacles presented by unconscious prejudice and by various types of egocentricity. The focus of discussion on any particular day depended on the particular relatives in attendance.

New perspectives were fostered by calling upon appropriate other members of the group to contribute. If a young person presented a problem concerning a sick parent other parents were asked to comment. Wives were invited to enter a discussion started by a husband about his sick wife. Sensitive issues lost some of their sting when they could be debated with someone not involved in the issue. Many relatives expressed considerable relief at discovering that other people had similar problems. In short, many of the benefits of group perspective and group transferences were observed among these individuals although they were not participating primarily for their own treatment.

Some of them very readily used the opportunity to talk about symptoms of their own, while others maintained a reserve and claimed to be speaking hypothetically, or about a third person. A few made appointments privately for individual psychotherapy. Many of them sought to speak to the group leader after the session and asked questions concerning the after-care of patients which they would not have thought to ask, and on which they would have remained unenlightened and even superstitious, if they had not been in the group. Several instances were noted where relatives had been apparently impervious to advice concerning their attitude to the sick person when they had been approached individually, but who seemed more open-minded after participation in the group discussion. Relatives who seemed to need further individual attention were spotted by social service workers sitting in on the discussions, who arranged for private case work interviews.

Many rigid personalities were noted in the group, usually with more manifest aggressiveness than the member of the family who had fallen ill. Some of the most rigid relatives failed to come to the group or came only once. Most of those who attended several sessions appeared to be intellectually cooperative but emotionally often more obtuse than patients in a similar group, since their defences were working more effectively for themselves. Several parents were observed in the group who merited Strecker's label of "moms"(8). This was particularly noted of mothers of young schizophrenic patients.

The parents of psychiatric patients were usually more resistant to new attitudes than were children or young husbands and wives. It appeared that age, and the fixation by habit of defense reactions which worked for themselves, operated against the adoption of new behavior patterns.

One mother of a schizophrenic patient became depressed, with guilt feelings, on realizing the part which her over-protective attitude may have played in her son's breakdown. She required much reassurance to reduce the guilt and allow her to take a more constructive approach.

A touch of narcoanalysis was introduced one day when the alcoholic mother of an alcoholic young man attended the meeting in a state of pharmacological disinhibition. Interestingly enough her volubility proved catalytic in its effects on the others and we had a very frank and fruitful session.

The group seemed to function most effectively when the membership was around a dozen. With larger numbers, including many newcomers, active discussion lagged and the leader was forced to lecture to a greater extent, with consequently less catharsis for those in attendance. With smaller numbers there was not as much variety in the points of view represented, and hence not as much tolerance developed for the viewpoint of the patient.

The group leader was not engaged in the psychotherapy of most of the patients whose relatives were in the group. However, from his knowledge of the patients at the time of their admission, and by regular attendance at ward rounds, he was sufficiently conversant with the principal problems to be able to guide the discussions into fruitful channels. This was possible because of the particular organizational setup of the Allan Memorial Institute, and the key position of the registrar, who acted as group leader. It is suggested that a more effective arrangement for a general application of this technique might be that in which the same psychiatrist handles both patients and relatives. Although it is often considered undesirable for the same psychiatrist to undertake individual psychotherapy on two members of the same family, there would not seem to be the same objections with the group technique. In fact it might be worth while to experiment with a group including both patients and their relatives, under the same psychiatrist who is directing treatment. Such a step has been made with the psychodrama technique(9). It may have possibilities at the purely verbal level and with the discussion group technique. These suggestions for family therapy are also broached as possibilities for more effective case work with patients' relatives by social workers instead of being carried on by a member of the medical staff.

No tangible data can be presented as to results with either the relatives or the patients who have been served indirectly. Testimonials could be supplied for individual cases where either the relatives or the patients felt that a difficult situation had been improved as a result of the discussions. There were also individual instances where periodic relapses had ceased concurrently with the relatives taking a new slant on things. On the whole, however, the technique is presented as one for which the effectiveness cannot be dissociated from the effectiveness of the concurrent methods of direct treatment of the patient, but which would appear on common sense grounds to be a worthwhile addition to the therapeutic battery available to psychiatry.

SUMMARY

An attempt has been made to supplement psychiatric treatment of patients by concurrent group psychotherapy of their relatives. Weekly discussion meetings have been

held of 4 to 30 relatives attending on general invitation or selected because of particular interpersonal difficulties with the patient. The technique was between repressive-inspirational and analytic, involving didactic explanations and group ventilation of interpersonal maladjustments. More resistance was encountered than in psychotherapy with patients, and many of the relatives were quite rigid, defensive individuals. Many of them reported relief at being able to participate, however, and many were able to change attitudes which had been deleterious to the patient. Younger relatives seem to have been influenced more than older ones. A few individual experiences have been described. Some suggestions have been made for the conduction of future projects of this type. No results can be reported separate from the effects of other treatment, but the impression is favorable for the addition of this technique to the battery of psychiatric therapy.

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ART IN PSYCHOTHERAPY [1]

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The application of art to psychiatry is not new. Studies both by artists and psychiatric workers have shown that art is a valuable medium for understanding the personality. Robert Henri, the well-known artist in his work "The Art Spirit"(1) states: "Art is the inevitable consequence of growth and is the manifestation of the principles of its origin. The work of art is a result; the output of a progress in development and stands as a record and marks the degree of development."

Our study was undertaken to explore further possibilities in the application of art to psychiatry. This project was conducted in an army hospital in an overseas theatre by a team consisting of a male psychiatrist, a female psychiatric social worker, and a male artist. All patients on the neuropsychiatric ward who were willing to draw were included. Only those on "open wards," however, were permitted to participate in the therapeutic program. The initial interviews were conducted by the psychiatrist. The patients were then introduced to the social worker and artist, and were told that they were free to consult with any member of the team. As it worked out, patients usually chose one of the three as a definite therapist, but would from time to time see the other two as need arose. If either the psychiatrist or the social worker was selected regular sessions were designated. The therapy on the whole was intense, with an average of 5 interviews per week, exclusive of the art classes. The artist held 3 classes a week, each averaging about 1½ hours. In effect a team of therapists was accessible to each patient in the program.

The team conferred biweekly to review the drawings and to integrate the clinical findings with the material observed in the productions. New aspects appearing in the patient's drawings were emphasized, and the team decided what particular points to stress in therapy. If, for example, a new color appeared, the artist was advised to reassure the patient actively about it by pointing out the beauty of the object that bore the new color. Leads for the therapeutic sessions were frequently obtained from the drawings.

The following case report is detailed to illustrate the operation of the project:

L. S., a 23-year-old white male, was admitted for observation after having confided to his sergeant that he had engaged in homosexuality prior to induction. During his initial interview with the psychiatrist, the patient was tense and frightened. He complained of increasing anxiety and tension since entering the army. By the time of his admission to the hospital he was eating and sleeping poorly and was no longer able to work effectively. He denied any homosexual practices after induction yet he expressed concern about the possibility of receiving a dishonorable discharge. The following developmental and social history was obtained:

The patient was the youngest son of a family of 7 children. The father, an unstable, irritable, impulsive, and irresponsible individual, was physically cruel to his children. The mother was an obese, passive, acquiescent woman whom the father dominated. Five of the 7 children ran away from home in their early adolescence. The patient had two such experiences, the first at the age of 14, lasting 2 years; the second at 17, for one year. The family was always in precarious financial circumstances and the patient supported himself after the age of 14. He managed, nevertheless, to complete high school and prior to induction was employed as a clerk-receptionist to a psychiatrist.

From the age of 5, patient felt himself sexually different from other children. He refused, at that time, to continue sleeping with his older brother. At the age of 17 he had his first overt homosexual experience, and continued such practices until his induction. He had attempted sporadic heterosexual relations but was unable to consummate intercourse.

After several sessions with the psychiatrist the patient was told about our therapeutic project. He evinced interest and was introduced to the social worker and the artist. The worker and patient decided that they would meet 5 times a week and that he would join the regular art classes. In his initial session with her, he criticized the exaggerated emphasis placed on sex by the army. After several interviews with the worker, consumed in talking of the length of his hospitalization and his discomfort in being on a neuropsychiatric ward, the patient stated that he had run out of material and decided to discontinue his sessions. He attended drawing classes for the next 2 weeks

[1] This work was done at the 38th U. S. Army General Hospital in 1943 in the Middle East Theater of War.

without making any effort to see either the psychiatrist or social worker. After 2 weeks he spontaneously asked to return to the worker for further interviews. He stated that he wished to renew the interviews because he had been feeling very "jittery," even more so than on admission. In retrospect he recognized feeling more comfortable during the short period when he was in daily contact with the worker.

The resumption of his sessions with the worker corresponded with the end of his first month in the hospital. During this period his art work had been relatively unproductive. At the end of the first month, he made a drawing containing bombs, a noose, a swing suspended over water, and other fearsome objects. This precipitated considerable anxiety. It was the first subject he discussed on his return. He had dreamt about it and requested interpretation. The patient then confided his anxiety about receiving help from a woman and stated that he was becoming increasingly aware of his affection for her. His anxiety about this disappeared as treatment proceeded. He was gratified to realize that the fonder he became of the worker, the fonder he also became of the artist. He was delighted with the significant progress he was making both in his behavior and in his art. On one occasion, he joined the team in the drawing conference and felt comfortable discussing the associations to his drawings. To the frequent portrayals of water in his early productions, he associated his enuresis present up to the age of 12, a fact that he had not previously mentioned. His pictures, many of which he was making outside the art classes, began to have unity, real color, and flexibility of theme. He was more comfortable with the other patients and ward personnel. After 7 weeks of treatment, the patient wrote to his family. He had been unable to do this for several months. At the end of his second month of treatment, the worker took a 10-day leave. During these 10 days L. S. did little drawing and was rather depressed. When she returned, he again became productive. He mentioned at this time that he was interested in a girl and was corresponding with her. After 3 months of this type of therapy, he was evacuated to the States.

Patient's Drawings.—The patient's initial drawings were pencil and charcoal sketches of simple country themes. The material was repetitive, unimaginative, and did not contain people. Lines were drawn carefully and with hesitation. There were frequent erasures. When charcoal was used, the strokes were light. Water was prominent in all drawings. He tended to place objects in groups of 3. Although much symbolic material was presented, it was well integrated into the totality of the picture without disconnection. The water, for example, was represented as pools or rivers in pastoral scenes.

Color was offered to him at the outset but it was refused. After about 3 weeks, he began using water colors. The use of color was undertaken after considerable encouragement and its development was unusually interesting. All his colors were initially "washed out"; red was not used. The first evidence of color progress was his use of more intense tones of the colors already used. These were essentially green and brown. About 2 weeks after he began to work with water colors, pink appeared but was contained in a small object in the corner of a drawing. In the subsequent week or two, pink, originally shown peripherally, began to migrate centrally and developed intensity. After 3 or four weeks, he was drawing in fairly good tones of red. At about this time, he began to draw people. Along with this there was a simultaneous opening up of his personality. He became much more comfortable and spontaneous. By the time he was repatriated his drawings revealed a diversity of subject matter and a considerable freedom in the use of all colors.

Summary of the Case.—A 23-year-old male with a severe chronic neurosis was able, after 3 months of treatment with a team of therapists, utilizing art as a central technique, to show significant changes in his behavior and in his capacity to draw.

Discussion

1. *The Value of a Team of Therapists*

Ordinarily, group therapy refers to a single therapist treating groups of patients. Our project was somewhat novel in that there was a group of therapists treating the individual patient. The project disclosed that this type of setup had considerable value. It gave the patient an opportunity to do reality testing with more than one individual. The fact that he met similar responses from 3 quite different persons as to training, profession, and methods of expression gave more weight and meaning to the reassurance for problems and attitudes for which help was sought. If for any reason, serious resistances occurred with any one therapist, the patient was able to go to one or both of the other therapists. He could thus continue therapy and work out the resistances that had interfered or interrupted treatment with the definite therapist. The case report illustrated this point. Since in the team were 2 men and 1 woman, the patient also had the opportunity to work out specific difficulties he had with both sexes. He could move from one to the other when the major problem presenting itself at any time demanded either the man or the woman. As far as we could determine, there were no significant objections to this form of therapy.

2. The Value of Art in Psychiatry

(a) *Art as a Diagnostic Agent.*—A series of patient's drawings is an excellent diagnostic aid. Freyhane(2) in 1940 cited 2 cases in which a correct clinical diagnosis was made following study of the patients' drawings. In our own project we observed one patient who presented a good enough façade to make difficult a definite diagnosis of psychosis from clinical examination alone. His art productions, as his writings, illustrated a psychotic disconnection and dissociation. Further observation corroborated this diagnosis. Of much greater significance, however, is the fact that the patient's productions offer a superb avenue to his psychopathology. There is so distinct a connection between the artistic production and the basic personality pattern that this portion of the project deserves considerably more study than we were able to give it. Alschuler and Hattwick(3) state that "each pre-school child has his own individual pattern. These patterns differ from each other not on the basis of what is represented but rather on the basis of the children's feelings, which are individually expressed in their abstract use of color, space, line and form." We confirm this in adults and believe that further investigation along these lines can throw light on the constituents of the so-called constitutional factors in personality. Our observations were oriented about the following aspects: color, motion, content, fluctuations.

Color.—The manner in which color is used is especially informative. Anastasi and Foley(4) in 1944, in a study of the drawings of 680 individuals—340 patients and 340 normal controls—presented these individuals with a stylized, floral drawing for copying. This was one part of their study. They reported the following: complete refusal to use color was obtained only from abnormal subjects, as was monochromatic reproduction of the 6-color flowers, and coloring only the outline. In our own study we were particularly interested in the use of color. We related the use of washed-out tones of a color to deep-seated anxiety and inhibition. The manner of the use of the color red, or its absence, was particularly significant. The ability to utilize consistently all tones of red appropriate to the contents of the picture was one index of freedom of self-expression. With the color red as a criterion, we were able to grade the following series from severe anxiety to free expression as follows: (a) Washed-out tones of color without the use of red. (b) The use of all tones of certain colors, such as blue or brown, but without the use of red. (c) Use of washed-out red, *i.e.*, pink, but only in background objects. (d) Use of washed-out red but ability to use it anywhere in the drawing. (e) Capacity for use of all tones of red but only in background objects. (f) Capacity for use of all tones of red appropriately anywhere in the drawing.

Several of the schizophrenics even in their initial drawings used brilliant tones of bright colors such as red and yellow. This was the opposite of the washed-out tones initially used by L. S. but was equally inappropriate here since everything was brilliantly colored. The gradation of tone, necessary for color completeness, was not manifested. We believe that this phenomenon is also indicative of deep-seated anxiety. The difference is related to the capacity to inhibit. All patients who initially drew only the brightest tones of color were psychotic. We feel that the difficulty with inhibition, combined with the anxiety about color use, resulted in an explosion of bright colors. One patient, diagnosed as paranoid schizophrenia, broke his painting into compartments. Within the confines of these compartments he was able to use color. He would put a single color into each compartment, usually a brilliant tone of it, but was very careful not to permit the colors to transgress the boundaries he had fixed, or to mix with one another. We believe that this patient attempted to inhibit the color externally by putting lines about it to compensate for his difficulty to inhibit it internally.

Werner's findings(5) tend to substantiate this. Werner made a Rorschach study of 2 groups of male defective children—19 diagnosed as brain injured and 19 with a familial type of mental deficiency. He found a statistically significant difference in that practically no pure color responses to the Rorschach were given by the endogenous group, but were given by the brain-injured children. He refers to Klopfer's statement that color

responses are indicative of the affective motor reactivity of the subject. The predominance of color responses in the brain-injured group is therefore explainable on the basis of lack of control of affective motor energy. We believe that comparable factors operated to produce vivid color drawings by those of our psychotic patients who drew as with Werner's brain-injured children. Further, we think that the portion of the Rorschach test concerned with color depends on factors identical with those that determine color use in drawings.

Motion.—The initial drawings of L. S. were lacking in motion. Such objects as sailboats in water had form only. With this patient the portrayal of motion paralleled the development of color. In general, it was our experience that this type of relationship between color and motion existed in patients suffering from neuroses. The blaze of motion present in the drawings of psychotics parallels their use of brilliant colors. One schizophrenic portrayed the ward nurses dancing wildly through a room where everything was disordered, tables overturned, etc.

Content.—Whereas color and motion generally reflect the kinetic aspects of personality, the content is more closely related to ideation. It is a rich source of material for the elucidation of the patient's problems. The meaning of some of the content is quite clear. To understand much of it, however, requires that the patient associate to it as he would with dream material. Schilder and Levine (6) in 1943 used the content in this manner. Objects or subject matter that recur are especially informative. In the early drawings of L. S. water appeared repeatedly. To this he associated his early enuresis. Another patient repeatedly drew faces of men with very prominent jaws. This patient was consciously preoccupied with the thought that he did not appear manly enough. In reviewing the content, both what the patient presents and what he omits are significant. In his earlier drawings, L. S. did not draw people. People appeared when his interpersonal relationships improved. We observed that patients who consistently did not draw women were sexually anxious and inhibited. We observed that the content of psychotic drawings contained highly symbolic material not integrated or connected into a realistic unity.

Fluctuation.—Considerable insight into the stability of the personality can be obtained by observing the fluctuation of the use of color, motion, and content from day to day. The greater the fluctuation, the greater the clinical instability. Patients in therapy who improved frequently demonstrated such instability, which was reflected in their drawings.

(b) *Art as a Therapeutic Agent.*—As a therapeutic agent, art has value from many angles. To inarticulate individuals, art offers an opportunity to portray problems in much the same way as play techniques do with children. Curran (7) found that patients who cannot express themselves verbally often can draw their problems. He cited the example of a girl in the catatonic state who drew a thinly clad, stiff figure carrying a flower of innocence in her hand. Drawing is also a significant means of self-expression, which, as it develops under therapy, represents a development of a new resource and a further projection of the individual into his environment. In our project, however, art work was a major technique around which most of the psychotherapy was oriented. As the specific difficulties of the patient were discerned from his drawings and treatment sessions, the artist was advised to reassure the patient specifically in those spheres. In this way the artist was frequently communicating directly with the patient's unconscious. The patient, L. S., was not consciously aware of what the color red meant to him. Since the artist reassured him about the use of this color, the patient was helped in overcoming his anxiety not only about the color red but also about all the ideas consciously and unconsciously associated with its use. During art classes the artist himself was frequently occupied in drawing. Rather intuitively he would draw types of material about which the patients were anxious. This, in turn, gave the patients the reassurance of leadership so that they could bring out in their own drawings what the artist could reveal in his. Not infrequently specific drawings of a patient would precipitate anxiety. In those instances, as was cited in the case report of L. S., the patient would discuss the drawing with the therapist or therapists. He was given insight

into the material that underlay the anxiety, and additional reassurance about the material presented. In this respect it functioned very much as a dream. It had, however, the additional advantage of being a reality production.

(c) *The Value of Art as an Objective Means of Following Therapy.*—A series of patients' drawings present an objective means of following progress. The correlation that exists between the improvement in patients' drawings, in terms of color, motion, and form, and his clinical improvement observed by the therapist and by the patients' associates is a direct and positive one. Bender(8), in her work with children's drawings, stresses this point.

Summary

A psychotherapeutic team consisting of a male psychiatrist, a female psychiatric social worker, and a male artist, operating in a military setting, selected a group of patients who were willing to draw from the psychiatric section of a general hospital. All "open ward" patients willing to draw attended art sessions conducted by the art member of the team, and were seen in therapeutic sessions by the psychiatrist, psychiatric social worker, or both as the patients desired. The art productions of all patients were collected and studied. A case report detailing the progress of one patient is given. The value of a team of therapists working through the medium of art is discussed. The value of art as a diagnostic therapeutic agent and as an objective means of following therapy is likewise described.

Conclusions

1. Psychotherapy conducted by a team of therapists has definite advantages over therapy mediated through one individual.

2. The artistic productions of patients are an excellent diagnostic agent in that they permit the therapists to determine the basic personality structure from such productions.

3. As a therapeutic weapon, drawing and painting can be utilized as more than occupational therapy. They provide direct access to the unconscious, and therefore permit, through reassurance, significant reorientations with a minimum of interpretation. The artistic productions also provide material for the psychotherapeutic sessions, material which deals with the basic problems involved in the patient's disease.

4. A series of drawings which follows the course of therapy offers an excellent objective means of following therapeutic progress of the patients.

5. The artistic productions are a projection of the individual's basic personality structure. From their study, more information of fundamental physiology and formation of this structure can be determined.

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BIBLIOTHERAPY AS AN ADJUVANT IN PSYCHOTHERAPY

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Introduction

Bibliotherapy may be described simply as a means of psychotherapy through reading. It is not something new or recently discovered. Reading has been used for centuries to disseminate new ideas, alter old attitudes and activities, and initiate new ones. The power of the printed word has gained steadily through the years as more and more people have learned to communicate with one another by writing and reading symbols as well as by speaking and hearing symbols. The impressive growth of literature as a means of swaying the actions of men has been exemplified by the martyrdoms because of what was written in a Bible, the murderings because of what was written in a military order, and the mass paranoias because of what was written in a newspaper. And any reader knows, from his personal experience, the myriads of hopes and solaces that can be engendered by what he has read.

The use of reading as a therapeutic adjuvant in patients with personality disorders has been overlooked by many psychotherapists. Few serious efforts have been made to develop its possibilities. At a time when the need for psychiatric treatment is out of proportion to the means, when group therapy and short psychotherapy have gained considerable attention as effective and economical methods of therapy per unit time per patient, bibliotherapy might well present a promising area for further study.

It is the purpose of this discussion to consider the application of bibliotherapy to psychotherapy and to encourage further research in this field. The discussion will be limited to bibliotherapeutic possibilities offered by that technique in which reading is prescribed by the trained therapist, rather than by reading in which the patient's own choice or a haphazard choosing determines what is read. Studies of other applications of bibliotherapy have been limited; a comprehensive bibliography of the literature is given by J. M. Schneck(8).

How Prescribed Reading Works

Various analyses have been made of how the prescription of reading may effect improvement in the psychiatric patient(1, 4, 10). The substance of these analyses and some original observations are listed:

1. Prescribed reading may help the patient understand better his own psychological and physiological reactions to frustration and conflict. It may instruct the patient in the mechanics of mental function more clearly, completely and rapidly than the usual interview or question and answer technique. It may help remedy those maladjustments resulting from insufficient or erroneous knowledge.

2. It may help the patient understand some of the terminology used in psychology and psychiatry so that communication between the therapist and patient may be facilitated.

3. It may help or stimulate the patient to verbalize problems which he ordinarily finds difficult to discuss freely because of fear, shame or guilt. If, through the reading chosen for him, the patient discovers his own problems in the vicissitudes of others, his frequent feeling of being different from others may be dispelled. If he learns that others have had to face situations similar to those that contributed to or precipitated his personality malfunctioning or if he finds that others have attacked with success problems similar to his, his self-esteem may be buoyed and his eagerness stimulated to seek an adjustment that will lessen his conflicts.

4. It may help stimulate the patient to think constructively between interviews and to analyze and synthesize further his attitudes and behavior patterns. It may provide therapeutically planned vicarious life experiences which the patient has previously adjusted to only with considerable conflict, without exposing him to the real dangers of the actual experiences.

5. It may reinforce, by precept and example, our social and cultural patterns and inhibit infantile patterns of behavior.

6. It may stimulate imagination, afford vicarious satisfactions or enlarge the patient's sphere of interests.

Prerequisites of Suitable Patients

What patients are most amenable to this therapeutic aid?

1. The patient who seeks psychotherapeutic help is a better candidate than one who does not(7). Furthermore, if the patient asks the therapist whether there is some reading matter that will help, one may expect that the reading will be done more enthusiastically and conscientiously and that the results will be more beneficial(1).

2. The patient's age should make no significant difference. Twyeffort(10) has nicely outlined recommended reading based on the specific needs of various life epochs, and he has supplied an extensive bibliography, including instructive comments pertinent to each recommended book or article.

C. Bradley and E. S. Bosquet(2) in an article on the "Use of Books for Psychotherapy with Children," have included detailed reading lists which may serve as a guide to the therapist.

C. Kircher and T. V. Moore(4) have discussed the applications of bibliotherapy to the behavior problems of children and have listed and commented on 263 "character-building" titles.

There are few specific studies of the application of supervised reading in the psychotherapy of personality disorders in the adult age groups(1, 6, 9, 10).

3. Patients in the habit of reading and with good intellectual ability are preferable candidates. Conversely patients not in the habit of reading, or who will not or cannot read, are poor candidates.

4. In general, patients with mild psychoneurotic disturbances are the most favorable candidates for supervised reading. Psychotic or severe psychoneurotic patients are less likely to benefit from this method. However, the author feels that its use in severe illnesses has not been fully exploited by trained therapists and that considerably more experimentation is needed to determine when and how such a method may be used and what results may be expected. Certainly, with hospitalized patients prescribed bibliotherapy of the type described here would seem to be feasible only when the patient has entered a remission stage of a psychosis or has partially recovered from an acute depressive or anxiety state. One study has been reported in which reading prescribed by the librarian working in close co-operation with the doctor was used as a psychological aid for patients still grossly psychotic and receiving insulin shock therapy, but the results of this experiment were indefinite(5).

Indications and Techniques

Some instructive facts are known about specific situations in which prescribed reading may be valuable, and some hints are available about when and how reading prescriptions may be made.

Children and Adolescents

1. The importance of enlightened, factual, progressive sexual education for children is now realized to be a means of preventing emotional maladjustments in later life. Many parents are too modest or are unable to formulate and present the facts, and they may request the psychotherapist's advice. Prescribed reading may be valuable at the level of understanding of both the child and the parent. Through reading the child may gain help directly, and the parent may get an objective understanding of the facts and a means of presenting the difficult subject to the child.

2. Planned reading may be useful to help develop new interests and hobbies in the child with too narrow interests or too much occupied with its own problems and feelings.

3. T. V. Moore(4) makes helpful recommendations in using bibliotherapy with children. He advises that bibliotherapy should not be the first procedure attempted when its use appears feasible with a problem child. With a small child rapport is more easily established by play therapy. With adolescents, matters may be best talked over in first interviews. Bibliotherapy is best introduced after the child has developed a friendly attitude towards the therapist and is quite willing to talk over problems. Little children often refuse any book the therapist

offers and insist on one of their own selection. In such instances, one may get the child to pick out the book desired by pulling it well out on the shelf so that the cover design is in full view. Older children may be quite willing to read any book given them when they are friendly with the therapist.

ADULTS

1. With adults who appear to satisfy most of the prerequisites necessary for the success of this technique, before specific reading is assigned, a sufficient number of interviews should have taken place so that the therapist understands fairly thoroughly the nature of the patient's personality disturbance and the outstanding areas of conflict. Furthermore, the therapist should know enough about the patient's ordinary habit patterns to be able to foresee that the reading will not seriously disturb the patient and will not upset a previously close and congenial patient-therapist relationship. Occasionally, of course, reading may be prescribed which is calculated by the therapist, for diagnostic or therapeutic reasons, to provoke the patient's resentment or open aggression.

2. The therapist should be thoroughly familiar with his reading prescriptions so that he can appreciate his patient's reactions to what is read and can discuss the subject matter with him. The therapist must always individualize with his patients and should allow for considerable flexibility in using this therapeutic aid, developing its use to fit his own psychiatric convictions and techniques.

Illustrative Cases

Following are three cases which illustrate some of the ways in which bibliotherapy may be used in psychotherapy.

Case I.—Margaret Wilson Gerard(3), in the recent contribution of Alexander and French on short psychoanalytic therapy, reviews a case of a 35-year-old married woman who came for treatment because of vaginismus, dyspareunia, and fatigue from overwork. This patient had been inadequately prepared for the sexual experiences of marriage by her parents, who were "very religious, Puritanical, but devoted parents." At the end of the second interview, after she had discussed the attitudes of various people toward sexual activity and her own attitudes of guilt, she expressed interest in the anatomy and physiology of sex. The therapist lent her a book on sex. In the subsequent interview her reading led to an open discussion of her hostility towards her parents for their repression and deprivation of her normal sexual desires. Before therapy was terminated her presenting symptoms were gone, her social life was more centered and she felt less impelled to compete with her husband. "She was able to accept sexuality as a woman; her need to deny her femininity through masculine strivings became no longer necessary." Though prescribed reading was only a minor factor in accomplishing this therapeutic result, it undoubtedly facilitated recovery.

Case II.—One of the author's patients was an intelligent, 42-year-old, married woman who became markedly depressed, agitated and indecisive, scratched her skin continually until she produced a definite dermatitis, and expressed strong suicidal ideas. She had always been a person of high activity level, outwardly overbearing and demanding and inwardly insecure. She was very dependent, particularly on her aggressive and dictatorial father. She had tried to avoid emotional dependence on her husband in their twenty years of married life, and had successfully maneuvered and controlled him so that she might live near her father and go and come as she pleased. She was enraged that her father remarried at the age of 73 after her mother's death, and was openly jealous and disapproving of her elderly stepmother. Her illness had its onset shortly after her father indicated to her that he might desert her, for he moved away from the patient at his elderly wife's insistence.

Hospitalization of the patient was necessary. She was too disturbed and depressed on admission for effective interview-psychotherapy. Fifteen subshock insulin treatments and three electro-convulsive treatments were given. Her anxiety and depression improved considerably, but she remained indecisive and restless and indirectly indicated that she was not ready to return home to her husband who lived about 500 miles away.

She was eventually discharged from the hospital and seen as an out-patient in weekly interviews. During her hospitalization her avoidance of sexual topics was notable; when such topics were approached she tended to refer to various somatic complaints or otherwise digress. As an out-patient, while discussing her vague fears of returning home to her husband, she complained of a troublesome vaginal discharge and modestly mentioned her dyspareunia. She then asked whether there was anything she could read about sexual matters and was given "The Marriage Manual" by Stone and Stone (see Bibliotherapeutic Bibliography). During the ensuing interviews she revealed her fears of sexual intercourse with her husband, her feelings that sexual relations were disgusting and bestial, but admitted that she had orgasms without dyspareunia if her husband began his sexual approaches with foreplay when she was asleep. Then she recalled

how her parents punished her as a child for interest in her genitals. Finally, she expressed feelings that her mother and father had rejected her in favor of an older brother. It seemed to her that she had to deny her sexual drives and act like her brother to win her parents' approval.

Her reading had thus stimulated her to discuss subjects of great significance in her maladjusted personality, helped dispel her guilt about her sexual needs, and surely hastened recovery. Like Dr. M. W. Gerard's patient, she became much more passive, less overbearing, preferred to spend more time at home with her husband and to relax her guilty attachment to her father. Her neurotic excoriations, vaginal discharge and dyspareunia all disappeared.

CASE III.—Another illustrative case is that of a 32-year-old married dentist, overprotected by his mother as a child because of delicate health. To gain group acceptance among his contemporaries in late adolescence, he felt called upon to indulge in forbidden activities, including smoking, mild drinking and eventually illicit heterosexual activities, all of which occasioned considerable guilt and anxiety. In adolescence, the first time his mother discovered he was carrying cigarettes, he suffered marked hysterical and anxiety symptoms including palpitation, dizziness, headaches, generalized numbness, a feeling of a lump in his throat, shortness of breath, and dreams that he was deserted by his parents. Although he occasionally suffered transient symptoms of this sort during his college years and professional training and wondered sometimes whether he "might not be going crazy," he built up a successful dental practice, was respected as a part-time instructor at a grade A dental school, and was married and had two children when he first appeared for treatment. His symptoms of childhood had reappeared suddenly without apparent cause, in more distressing and disabling form than ever.

A series of ten weekly interviews revealed that he had always felt insecure and strongly dependent but had denied his insecurities and had always behaved as if he were unafraid, self-reliant and a man of the world. The recurrence of childhood symptoms was evoked largely by interpersonal difficulties with his wife, who took him literally, made no attempts to over-indulge him, took lightly his vague somatic complaints and tried to insinuate her mildly dominating tendencies into his business affairs. He countered by seeking an extra-marital sexual relationship, boasting of his conquest to his colleagues, and managing to make several obvious slips so that his wife might suspect his philandering.

During his therapy an opportune occasion presented itself to use bibliotherapy. He was given "The Happy Family" by Levy and Munroe (see Bibliotherapeutic Bibliography), which deals in lay terms with some of the common problems in marriage and with some of the specific psychological mechanisms related to his problems. He not only read the book but had his wife read it, and they were able to discuss frankly some of their differences.

He achieved a new understanding of his vulnerabilities before psychotherapy was terminated, has been free of symptoms for a year, and his family life has been considerably more congenial.

This discussion attempts to demonstrate a few of the applications of bibliotherapy when used in conjunction with other types of psychotherapy. Obviously, to rely solely on bibliotherapy to develop more satisfactory habit patterns would be futile. But its value is undeniable as a tool in hastening therapy, whether or not the therapist's goal is to teach the patient to live with his symptoms and habits or alter them. The wisest rule for the therapist to remember in using any collection of books for therapeutic reasons is to know each book and understand its action as thoroughly as the physician seeks to know the ingredients and actions of a medical prescription.

A bibliography follows which may be found useful in prescribing reading. Its contents are to be regarded as suggestions to guide the psychotherapist and are offered with the full realization that many other books are available which might prove equally as valuable. The therapist may be familiar with books not listed that he feels are more suitable to the specific therapeutic problems with which he is dealing. Or he may feel that psychotherapeutic use of some of the books listed is inadvisable. The discretion and originality of the therapist is anticipated in using this bibliography.

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PATIENT-PHYSICIAN RELATIONSHIP IN PSYCHOTHERAPY [1]

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Psychotherapy is often taught as if it were indistinguishable from psychodynamics and psychopathology. It is often assumed that an understanding of the patient's personality and reaction patterns is the exclusive goal of therapeutic endeavor. Except in a very few training centers, little consideration appears to be given to the rôle of the physician in psychotherapy. Moreover, when it is considered it seems to be associated with a tendency to oversimplify the intimately related problem field of psychopathology, and to reduce therapeutic procedure to a technical formula which affords the student only a small range for the development of clinical acumen and dynamic understanding.

It will be the object of this paper to present the doctor-patient relationship as a problem of basic interest and importance in the process of psychotherapy, with particular attention to the character of the physician's activity. Psychotherapy is certainly not at this time an entirely scientific procedure; it deals in variables which are so complex and so inconstant that in the end it must require from the therapist a highly personal and individualized orientation regardless of the particular theory on which it is based. To survive the bombardment of his patient's needs and demands, the therapist builds himself a protective coating out of the materials of his own personality, and this coating may be thick and ungiving, or it may retain some degree of flexibility and permeability. The therapist may, in other words, render himself practically immune from any sensitivity or responsiveness to the kaleidoscopic confusions of his patients, or he may continue to sense and accept his patients in their human quality without being engulfed in their distress. Insensitivity may take the form of active or passive hostility, detachment, evasion of concrete psychological realities, and theoretical dogmatism.

It is in the initial period of treatment that the therapist makes the commitments which determine the character of the relationship. Few patients have any concept of the course of treatment. Following the pattern of general medical practice, they present their complaints and their problems, and expect the physician to embark upon some program of active handling in relation to their presentation. They expect that they may be offered explanations, interpretations, advice, reassurance, or prescription, when actually whatever is of therapeutic value will initially flow out of the relationship, and at the outset it is neither necessary nor desirable to offer anything more.

In the beginning of treatment, the physician is an observer, interested in watching how the patient allows his anxiety to emerge, what he does with it, and how it affects his relation to the therapist. Once the patient has had the experience of receiving acceptance and understanding, no further explanations of the treatment process will be needed; he continues to utilize his trust in the doctor for progressive exposure of his anxiety, to which he becomes increasingly tolerant. We may then say that the therapeutic situation has been established, or to put it another way, that the patient has succeeded in identifying the therapist as a reliable and trustworthy parent figure. When the patient continues to ask questions about the treatment process, or continues to ask for direct advice or suggestions, or clings to the organicity of his symptoms, these are indications that he is fearful of the therapist, that he cannot surrender himself to the relationship, that he has built up too many previous patterns of mistrust and suspicion, and is unable to free himself of his fear of rejection. He views the relationship as a possible trap and needs to have time to convince himself of his safety. It is apparent that the therapist must be active in identifying such fears and suspicions and present the opportunity for their discussion as soon as the patient feels able to deal with them.

It seems to me that most of the difficulties which therapists encounter in the course of their practice can be traced to improper or

[1] Read at the 103d annual meeting of The American Psychiatric Association, New York, N. Y., May 19-23, 1947.

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inadequate training or schooling in a flexibly conceived discipline. When, as has usually happened in the past, the psychiatrist is thrown on his own resources for the mastery of his psychotherapeutic method, it is almost inevitable that he will dignify his own neurotic resistances by coming to regard them as valid technical measures. I do not believe that the psychiatrist's personal analysis always removes his particular neurotic responses to patients; rather, in addition, he should have the experience of intensive supervision, preferably in a clinic setting. Moreover, from the standpoint of training for psychotherapy, as distinguished from psychoanalysis, it is my opinion that such an experience is practically indispensable, and cannot be replaced by psychoanalytic training alone, desirable as the latter may be for the further development of psychotherapeutic skill. Training in a clinic utilizing the clinic team approach, particularly where service is provided to children, not only affords direct contact with the childhood processes which form the basis for adult neuroses but, possibly even more important, provides a setting of give and take in professional relationship which can be invaluable in dissipating residuals of infantile omnipotence and in establishing attitudes of respect and recognition for other professional groups which carry over into a more genuine tolerance and appreciation of the patient as a person. In other words, the sharing of professional activity with social workers and psychologists may mean more than a technical acquirement. It may, if properly carried out, influence the philosophy of the therapist toward a broader and more humane view of patients and of the factors which contribute to emotional recovery.

The following criteria suggest themselves for the early indoctrination of the therapist:

1. The procedure lends itself to descriptive statement, which while not necessarily exact and dogmatic is still capable of ready transmission to students.

2. Initial orientation is fairly simple and a student with little or no background in dynamic psychiatry may still acquire a secure method of procedure on which to base the development of further skill.

3. It is not formalistic; *i.e.*, it is not based entirely on a narrowly defined technical procedure but leaves the way open for a steady expansion of the student's psychodynamic insight, and therewith increasing sureness of direction and goal.

4. It maintains the physician-patient relationship as the nuclear content of the therapeutic process, thereby imposing upon the student the need to understand and discipline his own reactions.

5. The stress placed upon the central importance of the doctor-patient relationship maintains the primacy of the experiential character of psychotherapy, and protects the therapist from will-of-the-wisp adventures into untimely interpretation, hypnosis, or other technical aids to overcome resistances which are best waited out.

Actually, the doctor-patient relationship is not a tool or instrument of psychotherapy; it is the primary process itself. It is the stage and the play, and not merely the way in which the lines are read. Unfortunately, the psychiatrist in training too often conceives of psychotherapy exclusively as a specific technique or group of techniques rather than, in its most fundamental aspect, as an experience in human relationship and understanding. With such a concept he does not avoid relating himself to the patient, but may lend the situation a special character in which the doctor plays the part of the paternalistic parent, rigid, dominating, and controlling. In effect, this recreates the anxious infantile dependency situation for the patient who has never been able to deal with his hostility toward the restrictive frustrating parent. The patient's hostility reinforces his dependency, making it necessary for him to accept this type of doctor-patient relationship, and interfering with the free development of reality strivings.

Such a situation arises readily when the therapist in training does not have the opportunity for adequate supervision, that is, when he is not put in the position of critically examining his own responses, finding their justification, and attempting to understand the relation to their underlying theoretical presuppositions. When, in the course of his interview with the patient, the therapist has made some comment, he must be constantly inquiring of himself: What purpose did it serve? Did it have the effect of deflecting the patient's interest from the

problem with which he was dealing? What line was the patient following which led to the therapist's comment? How did the therapist feel about the patient's remarks at the time when he threw in his own comment? Did the therapist know what the patient was trying to say, or had he missed the point?

In other words, the therapist's activity should consist of a process of constant inspection and analysis of the therapeutic situation, *i.e.*, of the interplay of reaction between physician and patient. The patient wants understanding, gratification, permissiveness, and absolution, and enters the relationship guarding against any threats to these needs, at the same time unconsciously exploring the possibility of having them met. The patient unconsciously tries to define the relationship by testing the therapist against previous relationship experiences, particularly the parental patterns, and more particularly, their authoritative and frustrating aspects on the one hand, and gratificatory on the other. What will I have to be afraid of? What may I expect to get out of it? What can I get away with and still not be rejected or rebuked? The patient is thus attempting to create a situation which will provide a maximum of gratification in exchange for a minimum of frustration. He brings into the relationship his repetitive, neurotic modes of getting along with people, and when he comes for treatment it is because his neurotic solutions have become finally unbearable, or have proven ineffective in a critical situation.

There is a general framework in therapy by which a therapeutic situation is created, and through which the doctor-patient relationship is defined. This consists, in the first place, of arranging an arbitrary appointment schedule and paying scrupulous respect to the patient's right to the time agreed upon. We have found, in our outpatient work, that a once-a-week schedule is satisfactory for the great majority of patients, with increase in frequency at any time the patient develops an acute emotional reaction which he might not be able to carry over a week without distress. It consists further in helping the patient to assume as much responsibility as possible for himself and the working through of his problems. How much he can do is a decision which may often have to be referred for discussion with the supervising psychiatrist. In the third place, the patient is left free to bring out feeling, and particularly anxiety, against successive layers of resistance. In general, the trainee is encouraged to wait out supportively those periods of resistance which are characterized by the emergence of too large a charge of anxiety, but to handle directly the resistance of hostility. It is considered to be important to allow the patient to acquire the certainty that no demands will be made on him that he is unable to meet without a flood of unmanageable anxiety.

There is, in addition, a specific area in therapy which differs from patient to patient, and is related to the particular patient's personality structure and psychodynamic trends. How far the therapist can go in this specific area will depend on the state of advancement of his training, his psychological aptitude, the adequacy and intensity of supervision, and the clinic policy. An important goal in training is to help the student recognize the kind of problems he can handle comfortably, and the limitations he must accept in relation to type of patient and therapeutic goal. Some therapists can adapt themselves readily, for example, to the problems presented by ambulatory psychotics. Some are able to stay with a problem over a long period of time; others prefer to deal with the situational factors in problems. But the therapist himself must learn to identify the areas in which he can be most effective, and to stay within his own limits.

The objective in psychotherapy can thus be characterized as the progressive development of the therapeutic situation in which the needs and problems of the patient are recognized, identified for the patient, worked through, and allowed to find gratification and resolution within the physician-patient relationship. The difficulties which arise may be inherent in the problem: *i.e.*, the patient is not ready or able at the particular time to make use of the therapeutic relationship, or they may be the result of one of the following common misplaced responses on the part of the therapist.

1. He makes a promise, explicit or implicit, which he is not able to fulfill. For example, he may promise to cure the patient, when all he is in a position to promise is his

own discipline in a relationship from which cure may result. *Or* he encourages the patient to believe that he will achieve cure through recovery of repressed memories and insight, as if these alone, without the emotional experience of the relationship, will solve all problems. After all, the understanding which the patient desires is in some way related to a quality of acceptance of his person and not merely to the elucidation of complicated symptom structures. *Or,* he fails to maintain the time schedule for which he contracted. *Or,* through unwise personalization of the relationship, for example by the free use of a patient's first name, or by too direct reassurance, he holds out the promise of direct libidinal gratification.

2. He fails to clarify the patient's reasons for coming to treatment and to deal with initial misunderstandings and misapprehensions. In the first interview, the therapist must attempt to arrive at some formulation, for himself, of the patient's expectations from treatment and his motives for seeking treatment. It can never be taken for granted that the patient wants help with all his problems. Certain types of neurotic adaptation are entirely satisfactory until the patient runs into an unusual stress situation. The help that he wants will then be related to the particular situation, and he may jealously resist intrusion into his basic neurotic pattern. The therapist must then be able to decide how far to go in treatment, and this in turn will often depend as much on the therapist as on the nature of the problem. Finally, the therapist may have to help the patient discover a need for treatment, if it has been covered over by the circumstances of referral.

3. He fails to understand psychodynamic trends which require identification and discussion. He does not follow what the patient is trying to say, what feelings he is trying to express. We are here concerned, of course, with the neurotic resistance of the therapist. It seems to be especially difficult for some beginning therapists to recognize and accept indirect or veiled expressions of hostility directed at them by their patients. The therapist who woos his patients is often unable to recognize their sexualized response. Often, these personal difficulties can be worked out through the supervisory process. The therapist begins to be less frightened by unfriendly feelings which his patients reveal in their relationship to him, develops greater tolerance of his own anxiety, and is increasingly able to respond objectively in the relationship situation.

4. He is unable to recognize the proper moment for allowing the relationship to terminate. He has a need to hold on to the patient, or reserve to himself the decision to close, not permitting the patient to take part in deciding. A good deal of treatment is unnecessarily prolonged because the process is not subjected to continuous critical examination, or because the therapist needs to have people dependent on him. The length of treatment obviously should depend on the kind of problem the patient brings, and not on special theories or needs of the therapist.

To summarize, this paper has been concerned with the patient-physician relationship in adult psychotherapy, with special reference to the activity of the therapist. There has been some discussion of the central importance of the relationship in the unfolding of the psychotherapeutic process. Certain criteria which might be useful in developing a method of training for psychotherapy have been suggested. Consideration was given to the problem of initiating the relationship and to many difficulties which arise in the process of adaptation to the discipline of therapy. The need for close and adequate supervision was stressed. In a period of transition in psychiatry, when a vast increase in the number of psychiatrists is being demanded, it seems especially important to pay close attention to training for psychotherapy, a hitherto almost neglected field. It is no longer possible to tolerate the point of view that therapists can be self-trained, or that training can be accomplished through any process of rapid indoctrination. The cornerstones of training in this field are knowledge and self-discipline. The perfection of the therapist requires a long period, perhaps a minimum of two years, of carefully supervised practice preferably in a clinic setting. It requires a long period of time because, to such a considerable degree, it involves the schooling of the reactions of the therapist in every variety of therapeutic situation, as well as the steady expansion of his psychodynamic insight.

THE TECHNIQUES OF THE INITIAL INTERVIEW AND METHODS OF TEACHING THEM [1]

FLORENCE POWDERMAKER, PH. D., M. D.[2]

APPROACHES TO THE PROBLEM

An initial interview presents problems in methods somewhat different, particularly in emphasis and approach, from that later on in treatment. The first visit may be crucial as to whether or not a patient will accept treatment. The two underlying differences in attitude with which this paper is concerned are expressed by the original meanings of the French "entrevoir" from which the word interview is derived. "Entrevoir" means "to have a glimpse of" which could be said to be typical of many interviews, while the intransitive, "s'entrevoir," means "to visit each other." In other words, one can conceive of an interview as one person getting a glimpse of another or as the establishment of a bilateral relationship between them, with the information obtained being an essential concomitant. The latter idea is widely accepted but has been more often honored in the breach than in the practice.

Because of the importance of the subject and the increasing number of psychiatrists and other doctors being trained in psychiatric practices, we can use all the information that we can gather on techniques of interviewing and methods of teaching them. Little has been written on the subject. Widely used outlines for the guidance of students are, with the exception of Whitehorn's,[3] organized only to guide the doctor in obtaining information and making observations of acute mental symptoms in order to get the superficial facts of the patient's history and present condition. From this a categorical diagnosis is tentatively established, the necessary safeguards for the patient determined, and treatment, if any, decided upon. It could be assumed by a student, by implication or omission, that the interview took place through a one-way screen through which the psychiatrist saw and talked to the patient but had no effect on him. It is noteworthy that in the standard guides for examination a two-way relationship has not been discussed. Nowhere in these is there a mention of the patient's ideas and feelings (except as they would aid in putting the patient in a diagnostic category) and of the importance of the doctor's attitudes to the significant material he will obtain, or in the establishment of a therapeutic relationship.

Whitehorn's guide is noteworthy for the emphasis on the importance of the feelings and attitudes of the patient. But the reactions of the doctor, his feelings toward the patient, and the process of establishing a therapeutic relationship (although the latter is present by implication in Whitehorn's guide) are not matters of general information available to students. It is on the doctor's reactions, therefore, that the main emphasis of this paper is put.

The "good" teachers impart their methods of interviewing by demonstration and example, but it is unfortunately true that many undergraduate students and residents do not have the advantage of any systematic or even scattered understanding of the relationships and practices involved. The real doctors eventually develop techniques out of their own experiences—and these techniques are often thought of as intuition.

Although in most schools, hospitals, and clinics the importance of establishing immediately a therapeutic relationship between the doctor and the patient is understood and even stressed, nevertheless these same institutions will require a complete case history, according to a set form soon after admission. It is obvious to any therapist that these two expectations may in many cases be quite con-

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[3] Whitehorn, John, Guide to Interviewing and Clinical Personality Study, Archives of Neurology and Psychiatry, September 1944, pp 52-107.

tradictory. Often the doctor senses a withdrawal on the part of a patient as he is being questioned, but the junior physician, knowing he must get this material if his case history is to be approved, presses for an answer. Or questions may open up a situation for which the patient obviously needs relief; or he may spontaneously start talking about it. The doctor, realizing that it will take considerable time to investigate this, brings the patient back to his symptoms, or his grandparents, or his early illnesses. The less experienced the doctor, the more anxious he is to get the required facts in proper order, and the less he learns about the patient. Where this requirement is part of a teaching situation, the student may learn a dynamic approach to psychiatry in lectures but, in his initial study of the patient, he follows a static routine based on nineteenth century concepts.

Nowhere in this paper is it to be inferred that it is not essential to get as clear and complete picture as is necessary for the particular patient and that a guide for this is not important, especially for the beginner. It is the kind of guide and its obsessive and mechanical use that are questioned.

The essence of a dynamic approach to the patient is the hope that, through the relationship between the doctor and the patient and the understanding of the *relationships* of certain events and ideas in the patient's life and his feelings toward them, the doctor will be able to have a therapeutic approach to the patient, that is, alter these relationships so as to diminish anxiety and increase his real satisfactions. But it is just the very relationships between such events which are often most jealously guarded by the patient, so that they do not come out in a stereotyped historical approach. One can only get even an inkling of them, when the patient is sure of the doctor's wholehearted interest in him, and not in facts which often seem irrelevant to the patient.

The sincere interest of the doctor usually gets across to the patient in the course of the conventional history-taking experience, but valuable time has been lost. Besides, in the therapeutic approach, opportunities of getting all the revelant facts soon present themselves. Actually, when the patient senses the doctor as a therapist rather than a gatherer of facts, there is a much greater interchange of understanding and feeling, which naturally means that the patient is freer in giving more pertinent information than when routine questions are asked.

Perhaps most important of all, when the interviewer is concerned with the examination rather than the patient himself, the doctor is not "listening with the third ear" as Reik puts it—the subleties escape him and he may not see the leads that the patient gives him. He therefore fails to develop an imaginative, thoughtful concept of the patient.

When the writer was asked to lead a seminar on the techniques of the initial interview, this seemed an excellent opportunity to analyze her own techniques critically, as well as to get further information on the practical needs and problems of young psychiatrists. It also served to study the seminar as a way of teaching the subject and contrast it with the clinical demonstration method which she had used in teaching the same subject. This paper is based on these experiences and includes a discussion both of content and methods of teaching it.

Data Needed and Attitudes of the Doctor

The necessity for a dynamic diagnostic formulation, even though tentative, determines the nature of the data gathered at the initial interviews. They would differ in many respects from the data required for a formal categorical diagnosis.

The data should also give some indications of the direction that therapy should take. Obviously, one must attempt to learn what the patient complains of, how severe the symptoms are and what he believes to be their genesis. One would want to know the reasons that the patient gives for being in the office or hospital, which may or may not have anything to do with his symptoms, in his opinion. It is important to know the patient's idea of treatment (if he has any), what he expects from it, and his ideas of the doctor's rôle.

One must evaluate, however tentatively, the presenting strengths and weaknesses of the patient's personality, in order to know what attitude to take—for example, supportive, reserved, varying degrees of activity. It is necessary to assess the degree of anx-

iety, the patient's ways of handling or expressing it, and the extent to which it disturbs him. As in the usual examination methods, one must, of course, evaluate the mood swings and the dangers arising to the patient and others from his moods.

Obvious physical and environmental factors that are seriously affecting the patient for better or for worse are useful to know at the start, if these can be obtained without disturbing the patient too much. It is usually most revealing to know any previous experiences in treatment, his attitudes toward previous therapists, and what was told him by them.

It is a prerequisite, of course, to give the patient the sense of the doctor's interest and kindness. Then, one needs to get the information described above as essential, without being so directive as to block the patient's spontaneity. This is rendered easy by the fact that the data sought are so obviously and immediately concerned with the patient's problems. The patient senses that the doctor is wholeheartedly trying to understand him, not just acquiring routine information. As long as the patient feels this wholeheartedness, he will accept any ineptness or obtuseness on the part of the doctor. Then the doctor can feel reasonably sure that the blocks that arise are valuable indications of the emotional situation in the patient and do not arise from a negative attitude due to the approach, *per se*. And he can interject comments or questions directly or indirectly that will help give him the details which he needs.

The stumbling blocks to successful initial contacts with patients became immediately apparent in the first discussion of cases in the seminar. The most important factor was the doctor's insecurity. This seemed to be due, in some cases, to the demands of the hospital or clinic for the rapid, formal work-up of cases and, in others, to a sense of inadequacy in regard to treatment. There was a fear of certain aspects of the doctor-patient relationship due to a limited understanding of the meaning and application of a dynamic approach in spite of verbal familiarity with it.

Some of the causes of anxiety in the doctor became apparent in the first seminar discussion. A member brought out that, when he had finished obtaining the information for the record, he was completely stumped as to what to do next and became quite anxious. It was clear from the discussion that he and others were very uncertain of themselves in therapy and had no clearly formulated ideas as to how to initiate treatment. During the interview they did not think of the material that they were getting in terms of possible ways of dealing with it therapeutically. This often led them to proceed without thought of its significance to the patient and of the therapeutic effectiveness, or lack of it, of their own attitude. This was illustrated by the familiar tendency of doctors to reassure the patient with a false or general statement in an effort to relieve their own anxiety, thus creating a negative response in the patient who wanted understanding. This negativeness then adds to the doctor's problems.

This insecurity may prevent the doctors from being on the alert for leads from the patient, as mentioned above. One doctor described an interview with a 48-year-old woman in an agitated depression, with self-accusatory and hostile preoccupations. A storm broke and the room became quite dark. The woman suddenly said, "You're white and I'm black," and became much more agitated and overactive. The doctor hurriedly turned on the light and became frightened when he could not quiet the patient and continue the formal examination. He tried in vain to interrupt and quiet the outburst, and, when he failed, terminated the interview.

In discussing this he realized that his own need to allay the patient's agitation, which was preventing him from getting the history, blocked him from thinking about and trying to understand the meaning of her remark and sudden change in manner, and from using the episode to establish a therapeutic relationship. It was pointed out that, for example, one might have made, in a tentative manner, such a remark as, "The dark seems to be troubling you. You see, it's light now," or, "Perhaps your feelings are dark and sad." What is said is not as important as the sense that the patient gets that the doctor is trying to understand her agitation. If he is concentrated on this, he is too occupied to become anxious.

Leads may be lost or rapport interfered with if anxiety compels the doctor to interrupt or otherwise take an active role, when it is not appropriate therapeutically. If he can get insight into his compulsion to interfere inappropriately, the energy of his aggression can be transformed into objective and constructive intellectual activity in behalf of the patient.

Many other problems of methodology in interviewing were clarified by taking the doctor's feelings and attitudes into account. This was illustrated by the lengthy discussion in the seminar of the

wide variety of approaches to a new patient, a paralyzed girl who had been in correctional institutions in her adolescence and then committed to a number of hospitals. The diagnosis varied between hysteria and schizophrenia and had never been established. Treatment had been varied, brief, and inconsistent. The seminar members brought out the following possibilities:

1. The patient's "pre-formed transference" or attitude toward the doctor would be an important early consideration because of her many contacts with doctors and others in authority. There would also be the doctor's own pre-formed counter-transference if he had read the long record before seeing the patient. Opposing views as to whether to read a record before seeing a patient were discussed from many angles.

2. The value of an authoritative approach was discussed by one doctor who wanted to indicate to the patient that he recognized the escapist nature of her symptoms and ask her directly whether she wanted to recognize what her situation meant and do something about it. This led to a discussion of the doctor's need to be authoritative and of the idea of the free will of the patient. It was brought out that, because of frustration over a failure in therapy, there is a temptation to assume that a patient can *will* to do something about her symptoms if she wants to, even though the psychiatrist knows better.

3. A supporting and accepting attitude was suggested as more likely to lead to an understanding of the patient's difficulties than the authoritative approach. The former could be indicated by remarks such as, "I can understand your being afraid to walk. You had a rough time trying to go on your own, etc." This could then lead to an effort to understand, without moral judgment, the relationship between her behavior and her feelings. This approach was contrasted with an interpretation in terms of motives and values. A statement that might lead to the accomplishment of the former would be, "I don't understand. We'll both start fresh and find out what the trouble is and whether or not I can help you." It would not necessarily be gotten over in so many words.

4. Questions about her inability to walk would be avoided because its only importance lay in its indication of the way in which she tried to solve her problems. Efforts to discuss it might be interpreted as an attack on her and might arouse anxiety. The necessity to avoid a direct attack on repressive efforts, as brought out by Sullivan,[4] was stressed, as well as the avoidance of traumatic material if there is not time for satisfactory, even though temporary, ventilation of the feeling involved.

5. The probability of the patient's exploiting a sympathetic approach, as she had with other doctors, was discussed in terms of nullifying the therapeutic efforts of the doctor. The physician's awareness of the patient's seductive approach and the need for insight into its meaning to the patient were brought out.

6. Another approach to this patient was suggested through her interest in knitting and the possibility of finding a sale for her work. The limited and incidental importance of such an approach was emphasized. It indicated that the doctor felt unable to form a therapeutic relationship in a more direct way.

7. The necessity of considering special procedures such as narcosynthesis early in the study of such a patient was evaluated in terms of their diagnostic and therapeutic usefulness in each case. The various aspects of the symptoms and personality of the patient needed careful consideration. For example, in this patient, who showed schizophrenic features, even though her symptoms were predominantly hysterical, one would need to consider the schizophrenic factors in evaluating such procedures as hypnosis.

8. The possibilities of using whatever the patient offered were illustrated by an interview in the record of some years ago. A doctor had made a side remark to the nurse while tube feeding the patient, concerning the mechanisms in hysterical patients and what a pity it was that this was so about this patient. When the tube was removed, the patient burst out, "It's all a lie." It was pointed out that this attempt to relate to the doctor, even though hostile, could have been used to get at the patient's defenses. The doctor might have replied with, "Well, perhaps I am wrong. What do you think?" and thus started an interview.

The discussion of this case is reported in such detail to show how the widely varied possibilties of the initial approach to a difficult patient were brought out by the students and critically examined. It illustrated to them the necessity of being able to use, at the very start, imagination and understanding to decide how to find and exploit the clues to the patient's mechanisms.

Various other practical points were clarified by the other cases discussed. These included the indications for and against doing a physical examination during the course of the initial interviews, particularly on cases with psychosomatic symptoms; the patient's need to understand the relationship between nervousness and physical reactions, and how adequate he thinks his physical examinations had been; considerations applicable to the doctor's rejection, acceptance, or noncommittal attitude toward the patient's ideas of his illness; the relation of anxiety in the patient to his aggressive attitude toward the doctor, or of "testing" the doctor, and the doctor's reaction to it. Some stumbling blocks, other than anxiety in the doctor, to establishing a therapeutic relationship were brought out, such as identification with, or rejection of

[4] Sullivan, H. S., Conceptions of modern psychiatry, *Psychiatry*, February, 1940.

the patient, undue admiration for his moral or intellectual qualities or success, and secondary gains to the doctor through his relation to the patient.

At the beginning of the seminar we planned to study the initial interviews with patients in each of the main diagnostic categories, thinking that variations in principles of techniques would emerge in relation to each of these. We found, however, that this did not happen. The emotional needs of the patient, his strengths and weaknesses, as the doctor senses them, rather than his symptoms, determine the attitudes in the doctor to which the patient could most readily respond. It depends, in part, in all probability, on what relationships in his life situations the patient associates with his pain and failure, on one hand, and on the nature of the security and dependence he had experienced on the other. The strength and weakness of the patient's ego and the demands and rigidity of his super-ego also affect the doctor's approach and what he can say concerning his ideas of the patient, plans for treatment, and so on.

It is, of course, recognized that these attitudes of the doctor are sensed by the patient, regardless of what the doctor does or says or does not do or say. It is obvious that one can sense the needs and fears of the patient only if one's whole attention is given over to him—rather than to one's own anxieties or to taking the history for the record.

Teaching Method

The seminar was limited to 10 members, but at times numbered up to 17, including visitors. It was decided by the group that more than 10 impeded free interaction between the members, and such sessions were less valuable.

All discussions were built around the presentation of cases which had been seen from one to three times by the doctor presenting the case and with which the leader was not familiar. The accounts were as detailed as possible without taking notes during the interview. The doctor presented not only what he and the patient said and did, but also his uncertainties, in addition to his feelings during the interview and on thinking it over afterwards. During the year, we studied representative neurotic, psychotic, and psychopathic patients. At the end of each session the techniques discussed and the conclusions reached were summarized by the group. Notes were kept by one member, edited, typed, and distributed at the next meeting. The discussions were critical, lively, and objective, and the members did not feel threatened by them. The spirit was that of a group of colleagues learning together rather than teacher and students. There was, therefore, little rivalry among the members to dominate the discussion. This point became obvious when a visitor who had not caught the idea of the seminar proceeded to monopolize the group and aroused considerable hostile feeling.

Summary

The development of methods of conducting the initial interview are of strategic importance in the treatment of the patient. This includes the effect of the reactions of the doctor on his techniques and on the patient.

The teaching of these factors by the seminar method is illustrated as a way of allowing students to discover and receive help for their particular needs and weaknesses, to arrive at their own conclusions, and thus to further their development. This is best accomplished through a cooperative group spirit in which the leader and students investigate problems together as colleagues. This makes for frankness and prevents defensiveness.

Since teaching is concerned with interpersonal relationships and not only with the dissemination of facts and experiences, it is capable of, and needs, further exploration of methods. This could perhaps be preceded by a searching criticism of the effectiveness of present-day practices. Observations and statements of students would indicate that there are apparently not enough "born" teachers to go around.

AN EXPLORATORY STUDY OF THE USEFULNESS OF A BATTERY OF PSYCHOLOGICAL TESTS WITH NURSERY SCHOOL CHILDREN[1]

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Detailed investigations have shown conclusively that, with adults, batteries of psychological tests are of greater diagnostic value than is any single test. Similar systematic studies have not been done with young children. It is believed that they are essential since many child psychiatrists feel a need for psychological test data to corroborate and supplement their clinical psychiatric findings. With this in mind, the authors undertook an exploratory study of the usefulness of a battery of tests for detecting maladjustment tendencies in nursery school children.

THE SUBJECTS

The subjects of the study, 22 in number, were all of the 3-, 4-, and 5-year-old children attending a local nursery school in March 1946 who remained long enough for the examinations to be completed. The school is maintained by a social agency partially dependent on community financial support. It admits chiefly children whose mothers must work during the day to supplement the father's wages or because the home has been broken up by divorce, death, or temporary absence of the father. Occasionally the reason for admission is the mother's "nervousness" or the child's problem behavior. In general the children belong to the middle and lower socio-economic classes.

COLLECTION OF DATA

Except for one 3-year-old, who consistently refused office interviews, each child in the study was seen by the psychiatrist for three psychiatric interviews. One was a free-play session in which a wide variety of toys was available to the child. During the other two sessions[2] only miniature life toys or sensory toys were presented. Verbatim records of the interviews were kept. To each child the psychologist working on the study administered the Stanford-Binet, Form L (1937 revision), the Rorschach test, and the first 10 cards of Murray's Thematic Apperception Test, Series 2. Another psychologist, working independently of the clinical study, gathered historical material and observational reports from the nursery school teachers.

THE CLINICAL CRITERIA OF ADJUSTMENT AND MALADJUSTMENT

In this brief presentation it is not possible to discuss in detail the data of the psychiatric interviews and their relation to the test results. The interview findings, along with case history material and observational data, were used by the psychiatrist for rating the children on a three-point adjustment scale: adequately adjusted, moderately maladjusted, and severely maladjusted. These ratings were made without knowledge of the psychological test results. The criteria of ideal adjustment were as follows: adequate social relations with age-mates, good rapport with adults, interest in play, ability to relax, freedom from intense anxiety, adequate frustration tolerance, adequate reality testing, adequate display and control of aggression and self-assertiveness, sound sleep, good eating habits, toilet habits adequate for age, a moderate degree of conformity, and relative self-sufficiency. A child was considered adequately adjusted if only minor, or one or two more marked, deviations from these criteria were noted; he was considered moderately maladjusted if, along with minor deviations, there were a few severe symptoms; he was considered severely maladjusted if there were many severe difficulties.

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[1] Read at the 103rd annual meeting of The American Psychiatric Association, New York, N. Y., May 19-23, 1947.

From the Menninger Foundation, Topeka, Kans.

[2] The kind of toys and some of the techniques used were those described by Lerner and Murphy in "Methods for the Study of the Personality in Young Children," *Monographs of the Society for Research in Child Development*, Vol. VI, Ser. No. 30, No. 4. National Research Council, Washington, D. C., 1941.

Of the 22 children in the study, 12 fell into Group I, the adequately adjusted; 4 into Group II, the moderately maladjusted; and 6 into Group III, the severely maladjusted. The following are illustrative cases.

GROUP I.—A 5-year-old girl whose mother reported that at times she seemed a little nervous and bit her nails. Her initial adjustment to the nursery school was considered satisfactory. She easily became a dominant group member. She not only would solicit attention from boys, but boys were irresistibly attracted to her regardless of their age. At times she was aggressive toward younger girls, pushing and slapping them. She was quite an impulsive child and quick to show anger. At nap time she had some difficulty falling asleep. Clinically, she was excessively demanding but accepted refusals and substitutes well. She seemed anxious to make a good impression. Her attitude towards the other youngsters was more frankly competitive than was seen in other cases.

GROUP II.—A 3-year-old girl who for the last year had worried her parents by masturbating sometimes for hours at a time. In the nursery school some masturbation was noted and she exhibited an unusual degree of interest in boys. She usually appeared tense and fatigued. She was unable to sit still and frequently chewed her lips and pulled at her clothing. Toward the teachers she was overly affectionate at times and she responded to demonstrativeness on their part by becoming increasingly excited. She had many friends but tended to get into trouble with them by insisting on being the leader. Clinically, apart from tense body postures with inability to relax, an occasional anxious facial expression, and an unusual degree of evasiveness about sexual matters, no abnormalities were noted.

GROUP III.—A 5-year-old boy who was not considered by his rigid and very religious parents to have any problems. The nursery school teachers believed him to be quite retarded intellectually. They reported that he usually looked blank, spoke rarely and then only in monosyllables or guttural utterings and needed a good deal of help with simple routines such as dressing. At nap time he did not sleep and made animal noises. His appetite was very poor. There were occasional toilet accidents. He had few play interests and avoided all but younger children. There was little spontaneous play. Clinically, there was little show of emotion. Facial expression was quite enigmatic. He was very awkward. He seemed exceedingly withdrawn and usually spoke in a whisper, using monosyllables and expressions, such as "gook." However, some of his behavior indicated that he possessed average intelligence. When treated affectionately he responded with pantomime clowning and provocative behavior.

THE PSYCHOLOGICAL TESTS EMPLOYED

The Rorschach Test,[3] a popular projective testing technique, has been used extensively with older children and adults. To date the test's usefulness with respect to the preschool age group has not been adequately validated.

The Murray Thematic Apperception Test, which requires the subject to make up stories taking standardized pictures as starting points, was used in the study in preference to oversimplified pictures designed for children because previous experience indicated the superiority of the more ambiguous and relatively sophisticated pictures for obtaining clinically significant material.

The Stanford-Binet Intelligence Test was used to check on the intellectual level of the subjects and to point up marked unevenness of functioning—the latter being a suggestive indicator of maladjustment at older ages.

TEST ANALYSIS AND RESULTS

The test records were inspected for the presence of responses, scores, and patterns, that is indicators, which might distinguish the 3 levels of adjustment as established by the psychiatrist. In several instances the moderately maladjusted and the severely maladjusted groups were combined to form one maladjusted group. Each of the 3 groups was sufficiently heterogeneous with respect to chronological age and mental age to minimize differences between them which would relate to these factors. Table 1 presents the distribution of chronological age and mental age in the 3 groups.

1. RORSCHACH TEST FINDINGS

Of the 3 tests included in this battery, the Rorschach test proved to be the most fruitful source of maladjustment indicators. The quality of color responses, use of black as

[3] On the Rorschach test, the interpretation and scoring methods used at the Menninger Foundation, described in detail in other publications, were employed. In general, movement responses were scored rigorously, while instances of clearly implied, though not explicitly stated, use of color were included as genuine color responses. (See Rapaport, D., "Diagnostic Psychological Testing, vol. II," Yearbook Publishing Company, Chicago, 1946.)

color, perseverations, and failures appeared to be of outstanding significance.

a. *Color Responses.*—It is commonly accepted that Rorschach responses based in part or entirely on the color of the inkblots relate to the intensity, appropriateness, and control

TABLE 1

DISTRIBUTION OF CHRONOLOGICAL AGE AND MENTAL AGE IN THE THREE GROUPS

Group	No. of cases	C. A.		M. A.	
I	12	3-6		4-2	
		3-7		4-1	
		3-8		4-0	
		3-9		4-11	
		3-10		4-3	
		4-3	Average 4.4	5-4	Average 4.7
		4-4		6-0	
		4-5		4-10	
		4-6		5-11	
		5-0		5-9	
		5-1		5-6	
		5-2		3-11	
II	4	3-6		4-4	
		3-7	Average 3.8	4-7	Average 4.5
		4-0		3-9	
		4-8		5-7	
III	6	3-4		2-3	
		4-5		5-1	
		4-5	Average 4.5	6-10	Average 4.7
		5-0		4-7	
		5-0		4-11	
		5-3		5-0	

of emotions. These color responses were the most helpful in distinguishing between the adequately adjusted and maladjusted children. We found that arbitrary color responses, such as "pink lions," occurred predominately in the combined moderately and severely maladjusted groups: there were 9 arbitrary color responses given by the 10 maladjusted children, whereas there were only 2 such responses given by the 12 adequately adjusted children. Complete absence of color responses was more frequent in the maladjusted than in the adequately adjusted subjects. Another discriminating finding was that the giving of only pure color responses (such as fire or blood), together with arbitrary color responses and color-naming, was, with few exceptions, restricted to the 10 maladjusted children.

Experience with adult tests would suggest that such responses relate to superficial emotional attachments to people, excessive inhibition, or withdrawal, and exceptionally poor control over emotions. However, it would require a much more detailed and extensive study than the present one to test the specific clinical significance of each of these responses with preschool children.

b. *Use of Black as Color (C' Responses).*—Black is used as color in such responses as "black dirt" or "a bird that's black." Of the 5 records in which there was more than one such response, 4 were the records of children in the severely maladjusted group of 6. The repeated use of black as color therefore appears to take on special significance. These responses may relate to the presence of unusually intense, perhaps incapacitating anxiety. The use of shading in responses, which is the most common indicator of anxiety in adult records, was rare in our subjects.

c. *Perseverations and Failures.*—Perseveration was scored when a response was essentially not supported by the configuration of the inkblot and when a similar response had been given on the preceding card. Failures were scored when no responses to a card could be elicited, despite urging. We found 4 records containing more than 4 perseverations, and 4 records containing one or more failures: all of these records were given by children in the combined maladjusted group of 10. None were given by the adequately adjusted children. Failures and perseveration may reflect pathological degrees of blocking.

No other aspects of the Rorschach records of this sample of children correlated with maladjustment. It will be noted that those scores from which we usually infer mode of control of emotions appeared to be more closely related to maladjustment than were those from which we infer the quality of intellectual functioning.

2. MURRAY'S THEMATIC APPERCEPTION TEST

The content and formal characteristics of the stories were analyzed. Findings which appeared to be useful in differentiating the adjustment groups were these: the quality of the aggressive content of the stories, the nature of perceptual distortions, and the presence of blocking.

a. *Aggressive Content of Stories.*—Two types of aggressive stories were distinguished. The first was characterized by an uncontrolled, gory, unusually intense expression concerning violence, destruction, and death which overshadowed all other elements of the story. An example is the following story given in response to a picture showing an elderly woman looking through a doorway, "It's somebody . . . . old man, doctor coming in, knock the lamp to pieces. He looks kinda funny. He looks dopey. He likes to break light bulbs. He's gonna crack his head, crack his stomach open and cut his legs off. He's gonna die."

The second type of story was characterized by a much less intense and less detailed expression concerning aggressive acts of a more common variety such as shooting, slapping, spanking, and fighting. Examples of this type of story are the following, both given in response to the previously mentioned picture: "It's a Jap. He's opening the door. He's gonna shoot that man in here. I'm just teasing"; or "He's looking in. I imagine he heard something and he looked in to see what it was. It was a wolf. He almost ate the man up. The man got him a gun and the wolf thought he was going to shoot him, so he thought he better leave him alone."

It must be stressed that stories with aggressive content tended to occur in all cases. Children who showed little overt aggression clinically gave very few stories of either type. Children who were clinically overtly aggressive but without severe emotional maladjustment gave many stories of the second, modulated, type and in a few instances one or two stories of the first, uncontrolled, type. Children who were clinically not only overtly aggressive but severely maladjusted gave many stories of the first type along with stories of the second type. Massing of stories of the first uncontrolled type, by which we mean the presence in a record of 3 or more such stories, occurred in 3 cases of the severely maladjusted group and in no others. Hence, it is suggested that a massing of stories of the uncontrolled type is indicative of maladjustment.

b. *Perceptual Distortions*: Perceptual distortions were the rule rather than the exception in the records obtained. The most common distortions were misrecognitions of sex. Only absurd distortions of relatively clear human figures appeared to be diagnostically significant. Three such instances were found in the combined maladjusted group of 10. Here the people were seen as a horse, a cow, and as owls.

c. *Blocking:* In one severely maladjusted child, extreme blocking was outstanding. There were 8 failures, and in reaction to the remaining pictures, only short descriptive sentences were given. This case was clinically a very withdrawn child. Sporadic failures occurred in several cases and did not appear to be significant.

3. THE STANFORD-BINET TEST

The analysis of the Stanford-Binet Test results included application of various scatter measures and qualitative item analysis. Scatter measures indicate unevenness of development or efficiency of different intellectual functions. The only scatter measure yielding significant results was a modification of Pressey's measure, which concerns itself with successes above the mental age level and failures below the mental age level. When the Pressey scatter score was divided into those points obtained from scatter below the mental age and those obtained from scatter above the mental age, it was found that half of the 6 cases rated severely maladjusted had scatter below their mental age which exceeded scatter above their mental age. Table 2 gives the distribution of modified Pressey scatter scores. No other cases showed this pattern. Qualitative item analysis at the age level of our subjects was not fruitful.

INTEGRATION OF RESULTS ON ALL TESTS

The adjustment groups appeared to be differentiated from one another both in terms of absolute numbers of indicators and in the distribution of these indicators over the several tests. This distribution is presented in Table 3. In the adequately adjusted group of children the average number of test indicators was 0.4 per case. In the moderately maladjusted group the average number was 2.3 per case. In the severely maladjusted group the average number was 4.7 per case. In the adequately adjusted group, not more

TABLE 2

Table of Modified Pressey Scatter Scores

Group	Case	MA	CA	IQ	Scatter
I	1	3-11	5-2	76	+1
	2	4-0	3-8	105	+6-3
	3	4-1	3-7	114	+2
	4	4-2	3-6	119	+6
	5	4-3	3-10	111	+7
	6	4-10	4-5	109	+1-1
	7	4-11	3-9	131	+9
	8	5-4	4-3	125	+3-1
	9	5-6	5-1	101	+8-2
	10	5-9	5-0	115	+6
	11	5-11	4-6	131	+8
	12	6-0	4-4	138	+4
II	1	3-9	4-0	96	+12-1
	2	4-4	3-6	124	+9
	3	4-7	3-7	128	+4
	4	5-7	4-8	120	+6-2
III	1	2-3	3-4	68	+4
	2	4-7	5-0	92	+4-1
	3	4-11	5-0	98	+3-4
	4	5-0	5-3	95	+3-4
	5	5-1	4-5	115	+4-5
	6	6-10	4-5	155	+9

TABLE 3

Integration of Test Results

		Rorschach test							T. A. T.			Binet Scatter more below MA than above
Group	Case	No color	Pure C only	Arb. color	Color naming	>4 persev.	Fail-ures	≥1 C′	>3 viol. aggr.	Many failures	Absurd perc.	
I	1	..	..	..	..	..	..	X	..	..	..	..
	2	X	..	..	..	..	..	..	..	..	..	..
	3	..	..	..	..	..	..	..	..	..	..	..
	4	..	..	..	..	..	..	..	..	..	..	..
	5	..	..	..	..	..	..	..	..	..	..	..
	6	..	..	..	..	..	..	..	..	..	..	..
	7	..	..	X	..	..	..	..	..	..	..	..
	8	..	..	..	..	..	..	..	..	..	..	..
	9	..	..	..	..	..	..	..	..	..	..	..
	10	..	..	..	X	..	..	..	..	..	..	..
	11	..	..	..	..	..	..	..	..	..	..	..
	12	..	..	X	..	..	..	..	..	..	..	..
II	1	..	..	X	..	X	..	..	..	..	..	..
	2	X	..	..	X	..	X	..	..	..	X	..
	3	X	..	..	X	X	..	..	..	..	..	..
	4	..	..	..	..	..	..	..	..	..	..	..
III	1	X	..	..	X	..	X	..	..	X	X	..
	2	..	X	X	X	X	..	X	X	..	..	X
	3	..	..	..	..	..	..	X	..	..	..	..
	4	..	..	X	X	X	X	X	X	..	X	..
	5	..	X	..	X	..	..	..	X	..	..	X
	6	..	..	X	..	..	X	X	..	..	..	X

Average number of indicators on all tests per group:

Group I 0.4
Group II 2.3
Group III 4.7

than one indicator on the Rorschach test was found in any one case and no indicators appeared on the other two tests. The moderately maladjusted group was distinguished from the adequately adjusted on the basis of having more indicators on the Rorschach test. The severely maladjusted group was distinguished from the moderately maladjusted group by the presence of indicators on the Thematic Apperception Test and the Stanford-Binet. Hence, it appeared that, while the Rorschach test was the most fruitful source of indicators, the application of a battery of tests yielded additional data significant in differentiating adjustment groups.

As an aside it may be worthwhile to mention another suggestive pattern, although it was found in only one case of the severely maladjusted group: that, in the event that a more than average number of movement responses occur on the Rorschach test and the I.Q. is below 100, the presence of maladjustment is to be suspected.

Summary and Conclusions

In general it was possible for the psychologist, on the basis of psychological test results, to distinguish between 3 groups of nursery school children rated by the psychiatrist as adequately adjusted, moderately maladjusted, and severely maladjusted.

The following test features appeared to be related to the presence of maladjustment tendencies: on the Rorschach test—no color responses, pure color responses only, arbitrary use of color, color naming, more than one-half of the record consisting of perseverated responses, failures, and accumulation of responses using black as color; on the Thematic Apperception test—accumulation of unusual violently aggressive themes, blocking, and absurd perceptual distortions; on the Stanford-Binet—more scatter below the mental age than above it, using a modification of the Pressey measure of scatter.

The Rorschach test proved to be the single most useful test for determining maladjustment, but the value of using a battery of tests was indicated.

In conclusion, the authors wish to stress that the study reported was exploratory and based on a small number of cases(22). It by no means covered all the aspects of the problems involved, and the results must be considered tentative. More systematic and extensive studies are required to determine the specific implications of our findings and to point up other significant potentialities of psychological testing in the preschool age group.

THE CONCEPT OF PSYCHOGENESIS

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Idealists, materialists, and ordinary mortals have been in agreement on one point; that they knew sufficiently what they meant by the words "mind" and "matter" to be able to conduct their debate intelligently. Yet it was just in this point, as to which they were at one, that they seem to me to have been all alike in error.—BERTRAND RUSSELL.

A few years ago Dr. Stanley Cobb wrote: "If terms could be defined before every meeting of psychiatrists and the definitions adhered to by the speakers and discussors, much waste of time and printing could be avoided."[2] With this statement I fully agree; and since the term "psychogenesis" is frequently used by psychiatrists, usually without any definition of it, it seems to me that a semantical analysis of the term is long overdue. Whether or not psychiatrists will be persuaded to adopt the particular definition I suggest is of very minor importance. What is very important, I think, is that the need for some definition be generally recognized. For while no definition of "psychogenesis" can—without confusion of symbolic function—be described as true, yet manifestly some definition of the term is a necessary condition of the truth of any statement in which it occurs—an elementary logical point which, if widely understood, would dry up at its source many a gushing well of verbiage, both in and outside the field of psychiatry.

Dorland's Medical Dictionary defines "psychogenic" as "originating in the mind"—which is not much help. In this context, perhaps we may say, as a first approximation, that something is to be called psychogenic if among the causal factors involved are some which have mental properties. Now both "mental" and "causal" are notoriously vague, ambiguous, and confusing terms. It is not that they are meaningless; rather, they are so overloaded with obscurely different connotations that any critical person is likely to feel puzzled if he tries to attach to either of them a *definite* meaning, while the more definite the meaning he does attach, the more likelihood that critics (of the sort who feel uncomfortable unless they are in a fog so dense that their differences from others cannot be noticed) will charge that the definition is "arbitrary." Hence our problem is to move around in the vaguely delimited contexts suggested by these terms and to try to get our bearings without stepping on anybody's toes.

We shall make explicit, at the outset, a postulate which few, if any, psychiatrists are likely, I think, to reject, *i.e.*, that psychic or mental[3] events are functions of organisms. But this statement gives us only the genus within which the species of event, mental, falls, and does not specify the differentia; for of course walking and breathing and digesting are also functions of organisms, and they are not usually called mental. Now I suggest that an event is to be called "mental" when it is a mnemically conditioned reaction to a stimulus-object by virtue of which this object acquires the functional status of a sign, *i.e.*, points to something else, which is, therefore, its meaning. Such an event is "mnemically" conditioned because without the modification of the organism, as a result of prior "experience," no present item in experience would have meaning, since the meaning of any item is something acquired through past transactions with this item and other items related to it—*i.e.*, what it has grown out of, is associated with, or leads into. Also, while any object—within variable limits, depending upon the organism and various space-time as well as other properties of the object in relation to it—may be a "stimulus," yet to become a conditioned stimulus which functions so as to evoke a

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[2] Borderlands of Psychiatry, 1943, p. 117. For those interested in the theory of definition which underlies the present discussion, see my "The Dilemma of Definition," The Journal of Philosophy, XXVI (1939), pp. 505-517, and "What are Definitions?" The Philosophy of Science, XIII (1946), pp. 170-175.

[3] In this paper, I use "psychic" and "mental" as synonymous terms.

response that transforms the stimulus-object into a sign presupposes relations between the stimulus and previously effective stimuli, or —in phenomenological terms—between a given content of experience and some contents previously associated with it.

On this general approach to the meaning of "mental," colors, sounds, tastes, smells, and so on, while "given" as experiential contents or sense data, are not mental events. But such contents of experience take on the meanings they acquire, *because* of mental events, *i.e.*, certain acts of interpretation in relation to which (say) a given pattern of red *means* a red lantern on the side of the road which in turn means danger, or tenderness and rigidity over the right iliac fossa (together with other signs) *mean* appendicitis. In such cases as the latter, and thousands of others falling into the same generic pattern, the physician examining a patient responds to a set of related data in such a way (the way I call "mental") that the data in question have meaning *for* the physician, *i.e.*, they make him *think of* certain possibilities, and perhaps *believe that* certain eventualities will occur such as, certain laboratory tests will show such-and-such findings, certain therapeutic procedures are indicated, and so on.

Now there are, of course, endless questions, some of them extremely hard to answer, involved in any analysis of mind. But if I am going to have any time left for indicating certain psychiatric applications, I must ignore most of these questions. Hence I shall merely sum up this phase of the discussion by saying that I am construing "mentality" as a property of organic functioning of which I take as the definitive type what I have called an act of interpretation, *i.e.*, an act through the occurrence of which items of experience take on meaning, thus becoming signs which signify *other* items of possible experience, which latter are referred to various loci in different relational schemata into which events are ordered, as in saying: "Yes, I saw this patient before on June 6, 1945," or "I shall meet you, then, at the hospital the evening before the scheduled operation," or "Fortunately, she looks much better today—temperature down, appetite improved, outlook more cheerful." Judgments like these are interpretive acts which are formulated by means of conventional signs but are responses to both natural and conventional signs, and while the signs are not mental, the associated intendings, inferrings, referrings, predictings, believings, and so on, are mental, the phrase "act of interpretation" being used to refer to the common feature in these processes by virtue of which I am calling them "mental." [4]

Now let us turn our attention to the narrower, and it may be more vital, question of what is to be meant by "psychogenesis." I suggest that we follow the common sense empirical method of asking ourselves under what circumstances do we say that a person's disorder is psychogenic. Is it adequate to say, as some psychiatrists do, that the trouble has arisen in connection with interpersonal relations? I think not. Thus, if in a jealous rage, a husband strikes his wife on the head, with resulting unconsciousness, and later symptoms of concussion, I do not think anyone would say that these symptoms were psychogenic. But if this woman, reflecting upon the "wrong" that had been done her—we may suppose her "innocent"—became angry and upset, and later suffered from such symptoms as pounding heart and shortness of breath, sweating palms and blurred vision, when any man not her husband even spoke to her, I think every one would say that her symptoms were psychogenic. Why this difference? It cannot be because this latter case involved interpersonal relations: for obviously they both did. Now let us alter the hypothesis slightly, and see what we say. Suppose that the jealous husband, instead of striking his wife, merely lost his temper, and attacked her verbally, threatening to divorce her if she ever had anything to do with another man. Here again, if the wife developed anxiety symptoms, we should say, I think, that they were psychogenic.

[4] On this definition of "mental," a mind becomes a more or less well-integrated set of sign-mediated reaction tendencies, which a given organism exhibits in relation to a range of stimulus situations comprising its internal and external environments, at various place-times. Mind, so conceived, is—from the logical point of view—a construct, inferentially built up on the basis of experience, *qua* interpreted, in the light of some categorial frame of reference.

Now what is there about these two latter sequences of events which makes us say that some of the later members in the sequences are psychogenic? I think it is that, in both cases of psychogenesis, a certain mental act, perhaps best called simply an act of interpretation, temporally *preceded,* and—as we suppose—*causally mediated,* the emergence of the symptoms in question. Plainly, acts of interpreting (as I use the word, anyway) are responses to some kind of experienced content; this harsh word, angry look, red face, violent motion, or what-not. But instead of the word, look, face, or motion being experienced with relative passivity or in comparative isolation, a certain kind of motor-cognitive reaction occurs, *i.e.,* the content is taken as signifying something not itself, but quite different from it, such as "he has no faith in me," "he hates me," "he may try to kill me," and so on. In short, the sounds and sights perceived by the wife are responded to as sign-facts. Generally, and tautologically, we may say that every act of interpretation in this sort of context is correlated, functionally, with a sign-fact; for unless the given content or datum, which is experienced, gives rise to, makes us think of, something else, the datum exists in a noncognitive vacuum, in which no echoes of the past are heard or sounds of the future are anticipated. If (what would be impossible) our *minds* were thus reduced to esthetic idiocy, no sensation would refer to any other, and no image would be taken as springing from or leading to any sensory experience. Without relating what is present to what is absent, thinking stops, meaning vanishes, and along with it—supposing the condition to be general and more or less permanent—what we call our minds. The resulting "experiment of nature," if it survived at all, could not go insane or suffer from a mental disorder or lose its mind, for it would have no mind to lose.

On the basis of this brief analysis, I tentatively suggest the following definition of "psychogenic," restricting its reference (for our purposes) to the field of psychosomatic medicine. Any syndrome, disorder, or disease is "psychogenic" if among the various etiological factors which bring it about there is at least one, in the life history of the patient, of the sort above called "an act of interpretation." Like most definitions, this one requires a lot of explanation. We may do this in part by trying to apply this definition to the case of the unhappy wife.

How it applies is pretty obvious. The wife in some sense may be said to know the language, and to have been conditioned by past relations with her husband, so that his linguistic and other kinds of behavior induced in her a more or less complex series of interpretations. Undoubtedly many of the causes of her acts of interpretation are factors of which she is not conscious, and which the most determined psychoanalyst, whether by remaining passive or actively intervening, is not likely to bring to the surface of her, or, for that matter, his own mind, for conscious inspection. I refer to what Cobb has called genogenic, histogenic, and chemogenic factors, some of which—we may reasonably suppose—would become known and would be interpreted as relevant if the psychiatrists knew a lot more than they do now. But clearly an unknown event, even though causally related to some known event we are trying to explain, cannot function as a sign-fact, nor in the manner of one become associated with, and meaningfully support, an inference to something not at the time being perceptually experienced. Thus we see that our definition of "psychogenic" implies that the patient has *at some time* been aware of certain events, and responded to them in the way required for the events to be called sign-vehicles, *i.e.,* any events which consciously mediate acts of interpretation. If the hypothetical wife we have been talking about was in a drunken stupor, and so was not conscious of what her husband was saying to her, then I am using the word "psychogenic" in such a way that his words on this occasion would not be for her sign-vehicles, and so could not be called an immediate stimulus to the psychic reactions on her part above described, which latter could, accordingly, not be referred to as psychic in explaining the wife's later symptoms.

Also, if her husband did experiments in pharmacology as a grim sort of hobby, and injected into his drunken wife a sufficient quantity of adrenalin so that he could later exploit her symptoms of anxiety, her anxiety

would be chemogenic and not psychogenic. On the other hand, if she—noting the various changes in her feelings and somatic functions—developed hypochondriacal symptoms, we should say that these latter were psychogenic. For clearly our definition here applies, *i.e.*, she would be interpreting certain facts, and these acts of interpretation would in turn give rise to other states, behaviors, or symptoms, which, accordingly, would be psychogenic.

Now it will probably be said that the definition of "psychogenic" I have suggested is both too narrow and too broad—as well as, of course, unclear and inapplicable! Those critics who say that it is too narrow may cite instances in which "unconscious thoughts" cause symptoms. Since perhaps most persons —certainly critics of the sort I have in mind—would call such unconscious thoughts "mental," it follows, allegedly, that my definition is patently inadequate, since it fails to cover the relevant facts. Now arguments like this seem inevitably to move in smaller or larger circles, and if the circle is large enough, the arguments appear to be generally acceptable—perhaps because one does not know on what *definite* grounds they might be justifiably rejected. Now, for my part, the more I listen to Freudian analysts—and honesty requires me to add, the more they listen to me—the more impressed I become with the evidence they are able to adduce (given time to go about it in their own way) in support of their theory regarding the etiological rôle of unconscious thoughts, with their associated affects, in the genesis of symptoms, both psychic and somatic. But according to Bernfeld, who is surely an authority, *all* unconscious thoughts have at some time been conscious, there being, perhaps fortunately, no secret back door into the unconscious, so that anything in it has presumably been examined by the censor, and found wanted, but not permitted. However, I have allowed in my definition for what I consider sound in this notion of repression. In fact, so far as I can see, there is nothing in the Freudian theory which—to speak a little loosely—contradicts the relevant part of the definition I have formulated, since the unacceptable content which is repressed suffers this fate because of (at least in part) an emotionally reinforced act of interpretation.

It might be argued that similar difficulties would arise in "taking care of" such facts as Morton Prince made a good deal of in his psychopathology, for instance, that patients under hypnosis were able to recall, with astonishing accuracy and completeness of detail, the appearance of some stranger with whom they had talked for only a moment, whereas—without benefit of hypnosis—they could recall comparatively very little of this stranger's appearance. I do not suppose that the explanation of such phenomena is easy, but I do not see that it helps much to postulate acts of "unconscious" awareness, even though we so defined these words as to prevent their falling into the null class.

Also, there are, of course, other sorts of cases, which give rise to some hard questions. For example, how we are to deal with judgments evidently based in part on so-called subliminal cues, of which (by hypothesis) the person is not aware, and yet some difference, not clearly recognizable or describable, is felt, which grounds the interpretation, often subsequently verified. Witness the clinical "intuition" of some famous diagnosticians, who are able to arrive at correct diagnoses without knowing how they do it, *i.e.*, on what facts their judgment is based. Difficulties also arise in connection with such phenomena as posthypnotic suggestion, in which a patient may lose certain symptoms, or carry out certain commands, while suffering from amnesia for the entire hypnotic episode.

But while both these sorts of cases are poorly understood, I do not believe that either makes it desirable to alter our definition of "psychogenic." Reactions to, or interpretations of, subliminal cues may be viewed as limiting cases of awareness of low intensity, the content of which is peripheral. While posthypnotic phenomena may be classed, I think without much argument, as psychogenic; for the patient in hypnosis is considered to be intensely aware of the hypnotist's suggestions, this abnormally heightened state of suggestibility involving augmented inhibition of countertendencies.

In view of the fact that much writing in the field of psychosomatics has to do with emotions and bodily changes, the question arises, is it necessary for the interpretation, which is psycho-etiologic, to be emotionally reinforced. By "emotionally reinforced" interpretation, I mean any act of interpretation which arises out of, or mediates, an emotional reaction, with the consequence that the emotion intensifies (sometimes to a traumatic extent) the meaning to the patient of the experience, thus making it a source of later disturbances. Or will *any* interpretation, in some contexts, suffice to produce symptoms? This is a question of fact which is extremely difficult to answer.

To consider the question more generally, we might be inclined to grant the plausibility of the psychophysical postulate that for every act of interpretation there is, in principle, a correlatable neural process which may, in certain predisposed individuals, tend to bring about somatic changes, whether these latter are classified as "morbid signs" or merely as behaviors. But I do not think that in practice we can do much with this postulate. For the sense in which our every thought is "recorded" (God only knows how or where) and later "makes a difference" in our behavior is so tenuous, and the implied claim (if any) so unverifiable by present scientific methods, that the issue is not one on which to waste much libido. To speak more properly, I am unable to attach any operational significance to what might be called holistic determinism, even though there is probably some heuristic value in assuming that all the prior events constituting a given biosocial history are causally relevant in explaining what a person does, thinks, or feels, and so on. Of course the problem, both in practice and theory, is where to draw the line so as to include the events comprising such a "history" and to exclude those which do not belong to it.

This problem is obviously crucial for psychosomatic medicine. We hear much these days of treating John Doe, and not merely his pneumonia, of "the person in the body," even of "society as patient." However, few clinicians have the energy—not to mention the knowledge—to bother with other than proximate causes. But our problem, fortunately, is further restricted, for we are concerned only with psychogenic factors, which have, up to this point, been construed as interpretations. So our question, when thus narrowed down, becomes: What class of interpretations is to be accepted as causally relevant?

Without making this paper intolerably long, this difficult question cannot be adequately examined, let alone finally answered. Very briefly, however, we may say that if we let A stand for some prior interpretation in the life history of the person, and B stand for some symptom or disorder, then B is psychogenic if the following conditions hold:

(1) If A, then B.
(2) If not A, then not B.
(3) If A varies, then B varies.

(1) defines (making certain assumptions) what we mean by sufficient causal condition; (2) a necessary causal condition; and (3) concomitant variation.

It is clear that as regards psychogenic factors we cannot isolate and control the probably relevant causal variables so as to be certain which, if any, of the three relations above distinguished holds in any given case. Thus we cannot say that the subjective, *i.e.*, the felt private aspect of the total psychosomatic state called "fear," is either a necessary or a sufficient condition of any disorder. For a very complex set of physicochemical events, both macroscopic and microscopic, are going on, which involve both whole and part behavioral relationships with the person's environment, when the person feels frightened. Hence when we say that such-and-such a condition is brought about by fear, we could never have adequate evidence to show that it is fear, *qua* merely private emotional state, which is either sufficient or necessary to bring about the consequences in question. Notice that this remains true even if we define "fear" so that a conscious act of interpretation is a necessary factor in *its* occurrence or genesis. For when anyone interprets a situation as fearful or becomes apprehensive regarding the outcome of any action, his own or someone else's, there is no way of eliminating, or holding constant, the nonpsychic or somatic events which occur ***at the same time***. This

being so, we cannot know whether, *if* all the relevant somatic factors operated in the same way, the same functional symptoms or structural changes might not occur *without* the felt conscious state called fear, nor can we eliminate the hypothesis that these symptoms *might* be produced without the whole complex of somatic events, unless we do this latter by definition, *i.e.*, by so defining "fear" that the somatic events are necessary constituents in the whole called fear. But this latter sort of definitional procedure, while a necessary logical condition of *asking* any question, is not a sufficient empirical condition of ever answering it.

What then can be meant, in some applicable sense, by saying that a disorder is psychogenic? Only, I think, that some interpretation has preceded it without which we infer (we could not prove) that the *particular* disorder, which in turn has both psychic and somatic consequences, would not have occurred. Thus, in the case previously considered, most of us would say that the interpersonal episode between husband and wife was a cause in the sense that, while *other* conditions were also necessary, yet *without* this particular one the consequent symptom complex would not have appeared, *at the time*. But such contextual qualifications are generally left out in making causal judgments. Holding the burning match so that the flame touches the paper is not a *sufficient* condition of starting a fire in the fireplace: the paper must also be dry, there must be enough draft, the wood (say) must not be too green, and so on. But common sense assumes, and science must postulate, that supposedly relevant *standing* conditions are fulfilled, when it is said that some particular event is a sufficient cause of some other event. Similarly, when it is said that some event is *necessary* to produce a certain effect, say an attack of asthma, we assume that, under the *given* conditions, the asthma attack would *not* have occurred, *except* for this event, not that the absence of this event would be certain evidence under all circumstances that an event of the sort in question, namely an attack of asthma, would not follow.

In view of these considerations, we see the importance of the third test of causality, namely, concomitant variation. Thus if we notice that degrees of felt tension or anger are so correlated with the intensity of some symptom, say headache, that the more angry one feels, the more his head hurts; and that as soon as his emotional tension is reduced to "normal" (for him) that his head "gets better" or stops hurting, then we should naturally suppose that his anger had something to do with causing his headache, or vice versa. The fact that an injection of adrenalin, instead of a fight with his best friend, might cause the same symptom would not make us say that the headache was not psychogenic. Why? Because we suppose that the same kind of effect may have different causes. But if, as in this case, it seems plausible to hold that the *same* factor, say, increased blood pressure with distension of the temporal arteries, is responsible for the headache, then why call one of the headaches psychogenic and the other one not? Plainly we do this for the reason that this common antecedent has itself *different* antecedents, and only one of these latter (by hypothesis) is a psychic factor thought by us to be relevant.

This latter point shows the very rough and somewhat arbitrary pragmatic character of the causal inferences we make in "explaining" symptoms. If we stop in our (temporally) backward search for causes with the "abnormally high blood pressure," then both cases of headaches are somatically caused. But if we go one step further back into the history, and find that "adrenalin was administered" in the one case and that "this patient's best friend made him angry" in the other case, we say that only in the latter case is the headache psychogenic, even though we may have sufficient evidence to support the view that in the angry state the patient unconsciously "administers" (so to speak) adrenalin to himself when he becomes angry, *i.e.*, that anger does lead, via adrenalin, to a headache.

But we also suppose that no *neutral* interpretation (if any) would cause the headache. Thus if the patient, instead of being a good friend of the (for him) anger-arousing person, was completely indifferent to the latter's actions, then it seems implausible to say that the patient's merely noticing that

so-and-so did such-and-such would "help to explain" his own headache a little later. Doubtless this is a matter of degree, and it may well be the case that no completely neutral interpretations ever occur. But, practically, we do distinguish between inferring that such-and-such is the case and doing this but *also* growing more or less emotional over the fact.

It may appear that a consequence of our definition, together with the relevant facts, is that *all* disorders are at least partly psychogenic, *i.e.*, contain (as parts of their complex biosocial histories) emotionally reinforced interpretations without which a particular disorder would not be exhibited at a given time in a specific context. Strictly speaking, I believe there is much to be said in favor of this general hypothesis. But, for reasons indicated above, the practical utility of such an hypothesis is perhaps mainly limited to suggesting the advice to be on the lookout for relevant emotional episodes which "meant" a great deal—have proved to be traumatic—in the life of the patient. Or, from the standpoint of therapy, it may suggest the wisdom of seeing how much we can alter a given pathological process by methods which rely chiefly on getting at the disorder through the patient's mind, *i.e.*, by means of using signs in such a way that the patient's own emotionally charged processes of sign-functioning are altered so as to effect some desired change in the rest of his behavior and feelings about it.

Such a therapeutic approach, relying partly, as it does, on words and their effects, is still felt in many quarters to be "unscientific." By this charge it may be meant that psychotherapy is often ineffective, or that the language used, both in practicing and discussing it, is hopelessly vague, or that there are too many uncontrollable variables, and so on. If the criticism is so interpreted, we must agree, I think, that psychotherapy is unscientific, in part and to some degree; for obviously no sharp line can be drawn between what is scientific and what is unscientific. But some "tough-minded" (though possibly a little confused) critics of psychotherapy seem only to mean by calling it unscientific that it "deals with the mind," or "messes around with intangibles." Such criticism easily falls into ad-hominem fallacies or trails off into metaphysical emptiness. In any event, it is well to remember that words, as vehicles of meanings, are quite as much "physical" entities as are electric currents, vitamin pills, or drugs administered through the parenteral route. Hence the real problem here arises out of the fact that at least parts of the *meanings* of words are inaccessible to public observation and are, therefore, exceptionally difficult to control. But when we notice that nearly all therapy employs instruments and methods which induce more or less emotional interpretations in the minds of the patients treated, it will be seen that this difficulty of controlling the mental effects of therapy, whether called psychic or somatic, is inescapable. Understanding this fact ought to make for a little tolerance where it is often badly needed, and might usefully be taken seriously along with the moral that, after all, the justification for any kind of therapy is not that it is "scientific," but that it cures, or helps to do so better than any other means available.

We may conclude, I think, that, unless we lose our intellectual balance and become one-sided fanatics, theoretical issues of the sort we have been discussing over the meaning of "psychogenesis" as contrasted with "somatogenesis" become, when we have to make what Dewey calls "judgments of practice," matters of degree rather than either-or disjunctions, since every case of illness probably has both sorts of causal factors among the relevant events in its history, and any sensible clinician will, accordingly, place the therapeutic emphasis where it seems likely to do the most good, regardless of his etiological classifications. For here, as elsewhere, relative semantical distinctions, when hypostatized into absolute metaphysical dichotomies, are only verbal escape mechanisms, and the quest for certainty, however dressed up for formal occasions, remains a symptom of immaturity.

SUMMARY

On the basis of the examination of a number of more or less typical instances of usage, it is inferred that to say of a given

syndrome, case of disordered function, or set of pathological changes that it is "psychogenic" is to say that among its causal antecedents are at least some psychic events of the sort characterized as being emotionally reinforced acts of interpretation. Some of the difficulties of applying this definition are examined, and a few concluding remarks are added on the "cash value" (in James' sense) of the concept of psychogenesis in medical practice. As for its cash value, in the literal sense, I leave it to those who practice psychotherapy to estimate—but it must be considerable.

CORRESPONDENCE

MUSIC IN HOSPITALS

Editor, AMERICAN JOURNAL OF PSYCHIATRY:

SIR.—Dr. Altschuler seems to have seized the occasion of the appearance of my booklet "Music in Hospitals" [1] as an opportunity to write an article of his own on "Music Therapy" rather than a review of the contents of the book and then adding his own discussion.

Consequently he overlooks the fact that my aim was to present a small handbook on hospital music for those having a practical interest in this specialized field, not to write a treatise on "music therapy."

I have carefully defined the limited scope of the booklet as indicated on page 7, last para.; page 8, last para., 2nd sentence; page 9, fourth para., another fact which apparently has been overlooked by the reviewer. This, in my opinion, deprives him of the justification for his statement that the book lacks a proper foundation for discussion. This is like deploring the lack of symphonic structure and development in a composition intended and published as a prelude, say, or a choral.

I am somewhat disappointed that your reviewer has not written some really constructive criticism. My booklet was, of course, not only a plea for collaboration between physicians and musicians, but actually the outcome thereof, as I have fully stated. Therefore I hope that an increasing number of physicians will have an opportunity to report to a wider public their scientific premises and laboratory findings with respect to music in therapy.

Sincerely yours,

WILLEM VAN DE WALL
Office of Military Government for Germany (U. S.),
Berlin, Germany.

[1] This letter refers to Dr. Altschuler's review of the author's book "Music in Hospitals" which appears in the Book Review Section of this issue of the JOURNAL.—Ed.

COMMENT

NATIONALISM—THE ATOM—HUMAN MENTALITY

Rousseau referred somewhere to human consciousness as a disease. Since wars of aggression and all other crimes great and small exist in the mind of man before they become deeds, and surveying the cumulative fruits of these human motivations—if only within the experience of the present generation—have we much basis for disagreement with Rousseau?

The question of human motivation is the paramount issue of our day. It is pointed up in the division of the world between East and West—a division in the thought processes of men. This division, which has the appearance of being frighteningly irreducible, is indicated in two "open letters" recently exchanged between a group of Russian scientists and Albert Einstein, and given wide publicity by the Emergency Committee of Atomic Scientists, of which Einstein is chairman. In his letter of transmittal, Vice-Chairman Harold C. Urey asks this question: "Are the Russians sincerely seeking acceptable and effective conditions of international control [of atomic energy], or are they delaying in the interests of ultimate international chaos?"

These two letters deserve the most serious consideration. They illuminate the mentality of those presently in control of Russia as contrasted with the western mind as exemplified by Einstein, whose letter, Urey remarks, "shows on our side a profoundly serious attempt to understand the Russian point of view and its background."

After acknowledging the eminence of Einstein as a scientist, his splendid advocacy of peace, his "humanitarian spirit," the Russian scientists condemn his idea of a world government, "which is nothing but a flamboyant signboard for the world supremacy of the capitalist monopolies." They refer to "the motley company" of those who recognize the need of some kind of world authority to keep this planet in order, including among the wearers of motley "out-and-out imperialists who are using it [world government] as a screen for unlimited expansion." They categorically reject the suggestion of a superstate which would encroach upon state sovereignty. Recalling painful memories of the czarist régime, "the chains of economic and political dependence that bound our country to the world capitalist monopolies," they also remind us that it was the "Great October Socialist Revolution" that made Russia "for the first time a really free and independent state, ... a reliable bulwark of international peace and security." Should Russia now surrender voluntarily this independence? "It is obviously preposterous to ask of us anything like that."

The Russians bolster their defense of national sovereignty by contemptuous reference to the colonial system of "the imperialist countries," which they maintain has resulted in an awakened national consciousness "of hundreds of millions of people who do not desire to remain in the status of slaves any longer." To prevent the liberation of these colonies, "the imperialists are resorting to the most diverse methods of military, political, economic, and ideological warfare," and by the same token "are endeavoring to discredit the very idea of national sovereignty."

The letter courageously animadverts to "universal suffrage and freedom of ballot" in the "bourgeois-democratic countries" and reminds us of the various devices by which Negroes in the southern states are deprived of the franchise. For good measure, the unsavory name of Bilbo is introduced. Here the letter probes a sore spot, and we bow the head in shame before the glorious example of free elections in Soviet Russia and in the countries enjoying her protection.

According to the Russian letter, the purpose of the United States is to convert "the UN into a branch of the State Department" in order to facilitate "the realization of imperialist schemes." The Russian scientists feel it their duty to point out that Einstein's proposal of world government would lead to the same result. "It would further the

unbridled expansion of American imperialism, and ideologically disarm the nations which insist upon maintaining their independence." And to clinch the argument they declare that "Einstein is sponsoring a political fad which plays into the hands of the sworn enemies of sincere international cooperation and enduring peace."

As this letter opens on a pleasant note with a gesture of compliment to Einstein, it ends in similar fashion. And in the closing paragraph occur these strange words: "Of course there is no reason why states with different social and economic structures should not cooperate economically and politically, provided that these differences are soberly faced."

Reading carefully this Russian letter, the highlights of which have been quoted, and then coming upon this amazing concluding statement, one can but marvel at the marshalling of words that seems to indicate a bridgeless chasm between Soviet and Western modes of thought, a chasm no less wide and deep than the semantic gap at Munich.

The Einstein reply reflects a widely contrasting intellectual climate. It is written by a scientist and expresses the scientific mind. The Russian attack is signed by four prominent Soviet scientists, including the president of the Academy of Sciences of the USSR, but its style does not bear evidence that its inspiration emanated from the laboratory.

Einstein agrees that a socialist economy possesses certain advantages "whenever the management lives up, at least to some extent, to adequate standards." He also agrees that capitalism, or as he prefers, the system of free enterprise, will not correct all social and economic ills. At the same time he exposes the error of blaming capitalism for all existing social and political evils and of proclaiming that socialism will cure them. Such a belief "encourages fanatical intolerance on the part of all the 'faithful' by making a possible social method into a type of church which brands all those who do not belong to it as traitors or as nasty evildoers. Once this stage has been reached, the ability to understand the convictions and actions of the 'unfaithful' vanishes completely." Einstein explodes the fallacy of *pars pro toto*, so characteristic of Marxian and all derivative thinking. The attribution to the United States by the Soviets of an "intention of economic domination and exploitation of the rest of the world" Einstein dismisses "as a kind of mythology." The psychologists would call it "projection." By contrast he makes sharp reference to the mischief of a totalitarian régime. "Any government is in itself an evil insofar as it carries within it the tendency to deteriorate into tyranny. . . . . It is obvious that the danger of such deterioration is more acute in a country in which the government has authority not only over the armed forces but also over all the channels of education and information as well as over the economic existence of every simple citizen."

Einstein's final plea to his Russian colleagues and his definitive argument in favor of World Government are based on his conviction "that there is no other possible way of eliminating the most terrible danger in which man has ever found himself. The objective of avoiding total destruction must have priority over any other objective." Compared to this objective, international controversies and bickerings are "insignificant pettinesses," and the mentality that shapes war-bound power politics, each nation straining for military supremacy, poisoning the minds of the oncoming generation—such motives must not be tolerated "as long as we still retain a tiny bit of calm reasoning and human feelings."

What shall we say as we contemplate these two open letters which reflect, as Einstein puts it, "the deep estrangement among the intellectuals of our two countries"? The Princeton scientist speaks his own mind and speaks likewise no doubt for most Americans. The words of the Soviet scientists sound uncomfortably like their masters' voice. Endeavoring to understand their immoderate hostility Einstein believes that "behind the aggressive front there lies a defensive mental attitude which is nothing else but the trend towards an almost unlimited isolationism." This escape into isolationism is understandable from Russian history remote and recent; but so long as it continues world peace and safety are in danger.

But the isolationist trend seems to be contradicted by the strange statement, above quoted, at the close of the Soviet letter—

"There is no reason why states with different social and economic structures should not cooperate economically and politically, provided that these differences are soberly faced." How do these words harmonize with the unrestrained and dogmatic castigation that precedes of the "capitalist monopolies," and the "predatory appetites of the imperialist forces that are striving for world supremacy. . . . disguised under the garb of a pseudoprogressive idea [*i.e.*, world government]"?

The apparently conciliatory statement seems strangely out of place in the letter of the Soviet scientists; it would have been perfectly at home in the Einstein reply. How resolve the paradox? Is it a manifestation of some kind of intellectual schism? Does it represent an expediency, the "false flag" of Karl Marx discussed by Schwartzschild in "The Red Prussian"? Is it a deliberate bid for the credulousness of an opponent? Does it reflect the ambivalency remarked by Toynbee of an oriental state that still looks toward the West and seeks to adapt the instrumentalities and even the language of the West to its own un-Western ends? Is the "strange statement" an emerging call from the genuine scientific spirit that has not been wholly suppressed and that thus gets interpolated in a political document?

Will the seemingly irreconcilable differences expressed in the two open letters eventually be compounded? Unfortunately there is in Soviet Russia no scientist who can speak with the voice of an Einstein.

NEWS AND NOTES

THE AMERICAN ACADEMY OF NEUROLOGY.—Announcement has been received of the establishment of the American Academy of Neurology, "dedicated to the furthering of the practice of clinical neurology and to stimulating teaching and research in neurology and allied sciences."

There are 4 types of membership: fellows, who have been certified in neurology or in both neurology and psychiatry and whose chief interest or practice is in neurology; active members, certified in neurology or in neurology and psychiatry; junior members, presently engaged in postgraduate studies preparatory to certification in neurology; associate members, whose interests are in fields related to neurology. It is planned to restrict dues to $5.00 a year, and it is expected that the first scientific meeting will be held this year.

Interim officers are an executive council consisting of Dr. A. B. Baker, Minneapolis, Dr. Frederick H. Lewey, Philadelphia, Dr. William A. Smith, Atlanta, and Dr. J. M. Nielsen, Los Angeles, and the interim Secretary-Treasurer, Dr. Joe R. Brown of Minneapolis.

INSTITUTE FOR RESEARCH IN PSYCHOTHERAPY, INC.—The Association for the Advancement of Psychotherapy in cooperation with the New York Consultation Center has organized the Institute for Research in Psychotherapy, the program of which will include training, therapy, research, and education.

(1) *Training Program.*—The primary aim is to encourage the development of teams of psychiatrists, psychologists, and social workers for community psychiatric clinics. Special programs will also be available to general practitioners, clinical psychologists, and psychiatric case workers. Instruction will include practical demonstrations on psychotherapy as well as lectures, and all students will have personal experience under supervision by qualified teachers in the management of various types of cases.

Required and optional lecture courses will include the principles and practice of psychotherapy; psychodynamics and psychopathology; short-term psychotherapy utilizing psychobiologic and psychoanalytic approaches; hypnotherapy; narcosynthesis; shock therapy; group therapy; case work; psychological counseling; child and adolescent psychotherapy; case conferences and seminars; organization and operation of a community psychiatric clinic; projective techniques in psychotherapy; seminar on psychosomatic medicine; therapy of the neuroses and psychoses; compensation and medicolegal problems in psychiatry; anthropological and sociological aspects of psychiatry; and industrial psychiatry.

Applicants for the comprehensive course must have an M. D. degree, general internship, and one-year residency in a psychiatric institution. Individual courses will also be available to psychiatrists and physicians in other fields.

(2) *Therapeutic Program.*—This will provide clinic services for those unable to afford the fees of private psychiatrists. There will be facilities for child therapy, group therapy, occupational therapy, art, music, hobby, physical and play therapy, a complete psychosomatic unit, rooms with a one-way screen for observations of techniques, an assembly hall and library.

(3) *Research.*—This will be a major function of the Institute. All types of psychotherapy will be studied and evaluated. The aim is to shorten treatment methods and to render them more efficient.

(4) *Educational Program.*—This will be adapted severally for the lay public, the general practitioner, the specialist in other branches of medicine, and the psychiatrist. It will be coordinated with the activities of existing agencies in the same field.

Further information may be obtained by writing to Dr. Emil A. Gutheil, Director of Education, Institute for Research in Psychotherapy, Inc., 218 East 70th St., New York 21, N. Y.

BRITISH MEDICAL ASSOCIATION.—At the 116th annual meeting, to be held in Cam-

bridge June 25–July 2, 1948, the programme of the section on neurology and psychiatry (July 2) under the presidency of Professor E. D. Adrian will be devoted to discussion of two topics: The Investigation and Treatment of Epilepsy of Late Onset (Sir Charles Symons, Mr. D. W. C. Northfield, Dr. James Bull); and the Early Recognition and Management of Senile Deterioration (Dr. G. H. Sheldon, Dr. Macdonald Critchley, Dr. Trevor H. Howell, Dr. Felix Post).

NEUROPSYCHIATRIC SOCIETY OF VIRGINIA.—At the winter meeting of this Society held in Richmond, Feb. 25, 1948, guest speakers were Dr. John C. Whitehorn, Baltimore, whose subject was "Psychotherapy," and Dr. George D. Weickhardt of Washington, who spoke on "Recent Developments in the Treatment of Neurosyphilis." Other speakers were Dr. Ebbe C. Hoff, on "The Effects of Dilantin on Anoxia Tolerance," and Dr. P. H. Drewry, who presented a case report.

The Neuropsychiatric Society joined with the Mental Hygiene Society of Virginia in active opposition to a provision of the proposed State Government reorganization plan which would have placed the state mental institutions under a welfare department which would have included also penal, charitable, and correction institutions. This feature of the reorganization plan has been dropped, and for the present the state hospitals will continue under the control of a State Hospital Board and a Commissioner as heretofore.

SYMPOSIUM ON ACETYLCHOLINE.—A symposium on the physiology of acetylcholine takes place at the Army Chemical Center, Maryland, April 21, 1948.

The role of acetylcholine in conduction will be discussed by Dr. David Nachmansohn of Columbia University; quaternary ammonium ions in nerve physiology, by Dr. R. Lorente de No, of the Rockefeller Institute for Medical Research; acetylcholine as a pharmacological agent, by Dr. Theodore Koppanyi of the Georgetown University School of Medicine; the mode of action of acetylcholine, by Dr. J. H. Welch of Harvard University; and the action of anticholinesterases on the insect central nervous system, by Dr. Kenneth D. Roeder of Tufts College.

DR. TOMPKINS HEADS VA NEUROPSYCHIATRIC SERVICE.—Dr. Paul B. Magnuson, chief medical director of the Veterans Administration Department of Medicine and Surgery, has announced the appointment of Dr. Harvey J. Tompkins as head of the neuropsychiatric service to succeed Dr. Daniel Blain, who has resigned to accept the position of medical director of the American Psychiatric Association.

Dr. Tompkins joined the Veterans Administration in 1935, and after serving in several veterans hospitals he was assigned to the central office in Washington in 1945 as assistant chief of the neuropsychiatry division and chief of the hospital section.

He is a diplomate of the American Board of Psychiatry and Neurology and associate professor of psychiatry, Georgetown University School of Medicine.

RESIDENCY TRAINING, KINGS COUNTY HOSPITAL.—The psychiatric division of the Kings County Hospital, Brooklyn, N. Y., has been approved for psychiatric residency training and has a number of positions available for appointment.

This is a new and completely self-contained psychiatric hospital with all clinical and laboratory facilities and a full-time mental hygiene clinic, handling every form of adult and child psychiatric problem. These services include separate wards for children and adolescents, prisoners, alcoholics, geriatrics, psychoneurotics, and psychotics. There is also a psychiatric library, and an intimate consultation relationship with the medical, pediatric, neurosurgical, and neurological services of the general hospital.

The hospital is now affiliated with the Long Island College of Medicine, and opportunities are available for degrees in graduate work during the residency.

The standard residents' salary of the New York City Department of Hospitals is $1560 with maintenance. Appointments with "living out" can be arranged, but no salary increase in lieu of maintenance is provided.

For information address Dr. Sam Parker,

director of psychiatry, Kings County Hospital, Brooklyn 3, N. Y.

DISABILITY STATISTICS, WORLD WAR II.—Speaking at the recent Award Dinner for General Paul R. Hawley, Major General R. W. Bliss, Surgeon General of the U. S. Army, summarized disability statistics from World War II as follows:

Of the 16 million men between the ages of 18 and 38 years who were examined by Selective Service, 30% were rejected for mental or physical defects. Neuropsychiatric disorders constituted about 12% of all those examined and 30% of all rejections for all causes. The principal psychiatric cause among white registrants was psychoneurosis; among colored registrants, psychopathic personality. There were one million neuropsychiatric admissions to Army hospitals during the war, and 39% of all discharges for mental and physical defects were for neuropsychiatric reasons. This 39% represents 382,000 persons, and in addition there were 163,000 who were discharged administratively, and not for medical reasons, because of ineptness, lack of adaptability, and personality defects.

Out of every 100 persons examined by Selective Service, 12 were rejected because of mental defects; 6 because of musculo-skeletal defects; 3 because of eye, ear, nose, or throat disorders; and 2 because of cardiovascular disease. These were the four leading causes for rejection.

THIRD CONGRESS ON GENERAL SEMANTICS, CHANGE OF DATE.—Instead of meeting in August, when it was tentatively scheduled (see the November 1947 issue of the JOURNAL), the Congress will take place October 29, 30, and 31, 1948 at Denver, Colorado. Those wishing to attend or contribute to the program should write to Hansell Baugh, Registrar, Institute of General Semantics, Lakeville, Conn.

AMERICAN NEUROLOGICAL ASSOCIATION.—The forthcoming annual meeting of the American Neurological Association will be held in Atlantic City, N. J., on June 14, 15, 16, 1948, with headquarters at the Claridge Hotel. Enquiries may be addressed to the secretary-treasurer, Dr. H. Houston Merritt, Montefiore Hospital, Gun Hill Road, New York 67, N. Y.

THE ABRAHAM A. BRILL LIBRARY.—At the New York Psychoanalytic Institute the library of approximately 1,500 volumes was dedicated last December to Dr. A. A. Brill and designated by his name. Dr. Clarence P. Oberndorf prepared the dedicatory address which, because of Dr. Oberndorf's illness, was read in his absence.

As part of the dedication ceremonies a bronze bust of Dr. Brill was unveiled. The sculptor was Olem Nemon, the same who executed the statue of Freud which is also in the Institute.

BOOK REVIEWS

IF A MAN BE MAD. By *Harold Maine.* (New York: Doubleday and Company, 1947.)

"If a Man Be Mad" is an autobiographical account of how and why certain things happened in the life of a chronic alcoholic. The where and when of events are anonymous.

The narrative embraces a retrospective account of childhood experiences and conduct and serves to illustrate the attitude, feelings, and behavior of a lonely, rebellious, misguided child, who, in striving for self-expression, disdainfully vilified and negativated that which he most desired or cherished.

His early life was devoid of any joyous landmarks so characteristic of normal childhood and youth and devoid also of continuity in any emotional sense, save an attitude of having no loyalty or responsibility but to himself and the need for self-assertiveness, even if incongruous in nature.

The latter was characterized by improvising stories and situations that eased his sense of being different from others of his family or his associates, and which protected him from the exposure of his uncertainty about himself and the world in which he lived.

He quickly learned in his middle 'teens that alcohol provided an artificial continuity to life and before his eighteenth birthday fully experienced the mad drive for alcohol which threw overboard all things by which men live, for the object of his addiction. Inwardly lonely and solitary, he lived only through the pain and surcease inflicted on himself and lost the will to escape it.

On reading the literature on alcoholism, he became more uncertain and fearful that he might be schizophrenic, or have some other sinister disorder and, without alcohol, thought perhaps that something would happen to him equal to, if not greater than, the thraldom occasioned by drink.

Alcohol became the whole of his future, the cancellation of the past, and a constant need of the present. There was, however, a constant clash between his intellectual acceptance of a desire and need to cast off the bondage of drink, and his emotional inacceptability of that need or desire. This inner conflict served to complicate and negativate his wholehearted or wilful efforts toward bringing about a cure. Other factors were also instrumental in contributing to his uncertainty.

In seeking aid through the medium of psychiatry he was repulsed in some instances, by the moralist taboo or intolerant attitude toward alcoholics; by some administrators dealing with problems of mental illness; by the uncertainty of a favorable prognosis of his situation with a tendency to regard him as intractable or place him in a category of patients unsuitable for intensive treatment; and by a lack of adequate training and of understanding among professional and ancillary personnel whom he contacted. Good literature, which he discovered by accident, gave him some help toward finding himself and "Alcoholics Anonymous" some hope. The latter was not wholly embraced by him because of his interpretation of the conversion principles in its philosophy.

After almost 20 years' experience with the degradations associated with being a "drunken sot" he encountered a different kind of experience which seemingly contributed toward a need for seeking a means for self-help. The new experience followed a brief period of abstinence during which he was visiting his mother's home and awaiting definite action by his local Selective Service Board. Lonely and restless, he one evening entered a public bar and on taking a few drinks became almost immediately very drunk; creating a disturbance, he was arrested and put in jail. While there he went through an episode of active hallucinations that he recognized, objectively, as being pathological; and following his release from jail he experienced a fearful encounter with compulsive ideas of suicide. The author's description of the content of his hallucinations while in jail and of the compulsive ideas toward his self-destruction on release suggests that more than a proximal relationship existed between them and his eventual choice to seek employment as an attendant in a mental hospital.

Later his interest, as an attendant to the insane, assumed the character of a useful service for others. Through his personal experiences with less fortunate people; his reading, study, and contact with psychiatric literature; and his contact, association, and friendship with at least one resident psychiatrist and with others, he came eventually to find more and more security and contentment within himself and with his associations with other people, without the need for alcohol.

"If a Man Be Mad" is not the first literary effort of the author. He has made previous and creditable contributions in both prose and poetry and perhaps some less creditable.

An autobiographical narrative of this sort, by an experienced writer, has value as an appeal for a better understanding and considerateness of the problems and needs of those who abjure all things by which men live, for the mad urge for alcohol.

It has other value since it records the experiences and observations about the phenomena of mass care and treatment of the insane and the organization of institutional caste systems among employees that has grown up in connection with it. The gulf that appears to exist between various badges of office encountered among various grades of employees in institutional work and the mutually protective unwritten code that develops within a particular group to safeguard the dignity of their badges of office often prove detrimental to the personal and individual needs and requirements of patients.

The author's observations have led him to believe that the phenomenon of mass care of the insane, as now practiced, is so over-flavored with threats and intimidations that patients are trained to fear force and power. Of this he remarks:

"Supposing, I asked myself, that the institutional system were changed over night, that intelligent and humane men were given attendants' jobs, working under doctors who themselves came on the wards and realistically studied the problems of patient care. What would replace this reign of terror and keep wards from becoming a pandemonium?"

He sees nothing offhand that would work satisfactorily among the older patients, since he regards the old institutional system as being so wrong that a new start could only be made by insulating or destroying the old mistakes.

His observation of how intimidations, threats, and fears are factors is further illustrated by his comment: "It was not necessary for me to beat them or choke them but it was, I swiftly learned, essential that I let them think I would." "Helplessly I was, in a measure, forced to join in that which I detested."

W. L. T.

FUNDAMENTAL PATTERNS OF MALADJUSTMENT. By *L. E. Hewitt* and *R. L. Jenkins.* (Printed and published by the State of Illinois, 1946.)

This monograph is based on studies of the clinical records of 500 maladjusted children referred to the Michigan Child Guidance Institute in Ann Arbor. Setting out with certain working hypotheses concerning the association of given behavioural patterns with particular environmental backgrounds, the authors seek to find confirmation of these clinical 'hunches' by statistical methods. In brief, 3 patterns of behaviour (which, for some reason, are called 'fundamental') are differentiated, first by simple inspection of the grouping of behavioural traits among a total of 94 traits considered, and second by the more refined technique of determining the tetrachoric correlation coefficients between traits in these self-constituted groups. These 3 behavioural patterns are named the *unsocialised aggressive*, the *socialised delinquency*, and the *overinhibited* syndromes. Approximately 6 traits are included in each syndrome pattern, and in a given case the presence of at least 3 of the designated traits is required before a 'diagnosis' is made. The coefficients of association of traits within patterns is high, but between the 3 patterns, low or zero. Of the 500 children, 52 qualify for inclusion in the first pattern, 70 for the second, and 73 for the third; and the amount of overlap is small.

In accordance with clinical preconceptions, groups of environmental items are then approximated to each behavioural pattern, and, again employing statistical methods, 4 situational patterns emerge, whose correlations with the behavioural patterns are then determined. Thus *unsocialised aggressive* pattern is associated with a situational pattern named *parental rejection;* the *socialised delinquency* pattern with *parental negligence and exposure to delinquent behaviour;* the *overinhibited behaviour* pattern with both the patterns of *family repression* and *physical deficiency.* Clearly justice cannot be done to this piece of research in thus cataloguing the names of the behavioural and situational patterns which emerge in the course of the study and merely indicating the directions of association. Suffice it to say, however, that the patterns are clearly delineated by the authors and appear compact, comprehensible, and clinically justifiable.

Previous literature in the field, which is remarkably scanty, is critically reviewed in the introduction. In addition, the 3 behavioural patterns are illustrated by means of chosen biographies, and in an appendix the relationships found between situational constellations and the 3 syndromes are discussed in terms of ego development and structure.

The major criticism to which any such research is inevitably exposed, namely, the possibility that the original collection of data for the case records was influenced by prejudices current among workers of the institute, is mentioned by the authors only to be dismissed somewhat cursorily. However, the writers, for the most part, show a proper restraint in the interpretation of their findings, pointing up their conclusions "in terms of trends, probabilities, multiple causal factors, correlations, and the like," rather than attributing certain patterns of behaviour to particular situational backgrounds, which would of course be unjustified in view of the absence of controls. In general, ample consideration is given to methodology, but a few pages devoted to an account of the routine clinical examination and appraisal of children coming to the institute would have been worth while as background material for the reader.

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MUSIC IN HOSPITALS. By *Willem van de Wall.*[1] (New York: Russell Sage Foundation, 1946.)

This booklet is in a sense a sequel of the book, "Music in Institutions," published by the author in 1936. It offers less, however.

If the author claims authenticity, and this is obviously the purpose of the booklet, then one can expect from him a thorough familiarity with the subject. The booklet is supposed to be a guide, and one cannot deal with methods and techniques unless one understands the principles, especially of a new therapy—music therapy. Those principles should be also made known to the reader.

But the author lays no foundation for his work, for he is pitifully unfamiliar with the basic factors of music therapy. There is a grave defect—absence of a bibliography. Except for a few footnotes of essays dealing with other subjects than music therapy, the author brings no proof that he has mastered the subject, and thus his booklet appears

[1] The author's comments will be found in the Correspondence Section of this issue of the JOURNAL—ED.

artificial and synthetic. For instance, there is no mention of the thalamus, the physiological point in the interpretation of the action of music; neither is there any explanation as to where music's powers reside.

One does not like to give in a review the stuff which should have been incorporated in the booklet, but since the subject is new and important, it is quite essential that it receive the treatment it deserves, and thus a very brief statement to this effect is proper.

The prophylactic and therapeutic prepotence of music is discernible in the workings of nature, where tone and rhythm, the raw material of music, serve a definite biological purpose. In all animals with a semblance of an auditory apparatus, the utilization of it for bodily orientation, procreation, defense and offense is evident; hence strong gravitation to sound and "music."

The power of music is also discernible in the sociological experiment; it has been documented in the laboratory and observed in patients in the ward. The therapeutic value of music has been reported by competent naturalists, musicians, physicians, and psychiatrists.

Historically, music is one of the most ancient therapies. The Egyptians used incantation or vocal music when religion and healing served together. Many primitive races have been using music in the form of dance-display-music of the muscles.

The study of folk legends, fairy tales, and myths reveals strong belief in the mysterious and supernatural power of music in restoring the dead to life and curing sick people. The Greeks linked music with medicine. Apollo was both the God of Music and Medicine, and his mythical son even to this day serves as a symbol of medicine. In medieval times, and later on in the times of Philippe Pinel, music was used as an aid in the treatment of mental patients.

For the last 100 years an accumulated body of data, based on experimental work and clinical observation, definitely points to numerous therapeutic properties of music. Its influence upon pulse, cardiovascular system, endocrines, blood pressure, circulation, respiration, reflex action, the various senses, fatigues, etc., has been described (Gretry, Charpentier, Urbantschisch, Dogiel, Lombard, Cannon, Tarchanoff, Féré and others). However, the greatest triumph has been in the field of mental pathology and mental diseases.

It has been found that music arouses attention in disturbed and confused patients, modifies their mood, stimulates their associations and imagery. It was observed that music can replace temporarily hallucinations, redirect aggression, decrease tension, and soften hostility. Alone and in conjunction with hydrotherapy it is a useful aid in management of the acute mental patient.

As an example of music's capacity to evoke specific mood reactions, Henver and Grundlach and others carried on careful experimental work with a large number of subjects and found that special music patterns are capable of producing specific feeling values and emotional meanings, attributable, they concluded, to recognizable elements in the tonal rhythmic pattern. Factors which have been experimentally isolated as contributing to differential mood effects are prevailing high and low pitch, wide and narrow total range, loudness and softness, orchestral color, differences in rhythmic pattern, rising and falling inflections, finality trends such as those produced by dominant pedal points, and the various characteristic effects of tonality relationships including modulation. It was pointed out that such factors do not operate in isolation, but merely in terms of their influence upon the total tonal-rhythmic scheme of music. The response is equal with musically trained and untrained people (James Mursell).

One could expect that in the light of the above and of available clinical reports, music as a therapy would be treated with greater trust and respect; but instead of bringing out facts, the author in his foreword emits a pessimistic note. . . . . "The subject is today still in the stage of personal opinion and debate. Available data have not been assembled, classified, and evaluated by authoritative medical organization. . . . ," (page 9).

In appraising the value of music as a therapy, it is obvious that the author is not clear as to what constitutes a therapeutic principle. He expects from music even more than one would expect from any other therapeutic agent; and he does not appear to be clear as to the basic difference between rational and symptomatic forms of therapy as evidenced by the following statement.—"Therapy is the utilization of a stimulus whose effect is predictable. The predictability is based on a theory as to the causes for the effect of the stimulus and the subsequent testing of that theory in order to prove whether procedure of it is correct and under what conditions. The next step is the development of a procedure, which again must be tested, to insure that the desired effect from the stimulus will occur" . . . . (page 22). Where does it fit into therapy with the spoken word? Can one predict the precise effect of a word even in the technique of a psychiatric analysis?

The usefulness of a therapy is substantiated or refuted through testing in the clinic—the final proving ground. If the medical man had been obliged to wait until a certain drug or chemical had been completely perfected no prescription would have been written in the last 4,000 years..

Rational therapy is still the exception rather than the rule, and especially in acute psychiatric conditions one must depend on palliative measures. Music, because it shares with the other therapeutic agents the property of either stimulating or inhibiting function, has its *raison d'être* in the mental hospital. Indeed, because of its socializing properties and the æsthetic and spiritual influences it possesses, music is eminently useful in the ward.

The booklet under review has, however, also its good sides. It emphasizes the need for a plan, a clear and regulated approach with music in hospital work. It also calls attention to the sense of proportion the musician should cultivate in his contacts with patients, the hospital staff, as well as

the institution's routine. The admonition which the author gives to the musician: "The musician should never be encouraged or permitted to undertake the medical interpretation of the patient's response to his prescribed participation in any music activity," might be applied also to musicians who write books on music therapy.

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REHABILITATION: ITS PRINCIPLES AND PRACTICE. By *John Eisele Davis, M. A., Sc. D.* Revised and enlarged edition. (New York: A. S. Barnes and Company, Inc., 1946.)

By his long experience with the rehabilitation of the mentally and nervously ill Dr. Davis is well qualified to write on this subject. The present volume is based on an earlier one and gives information broadened by further experience and study. There are 9 chapters, an introduction, appendix, and index, a total of 264 pages. Acknowledgment is made to a number of authorities who have aided the author in making his revisions.

The chapters are titled: I. Effect of War and Depression; II. The Psychiatric Approach, General Considerations; Types and Disease Entities, General Considerations; III. The Psychological Approach; IV. Interest and Effort Theories; V. Elemental Principles of Mental, Nervous and Physical Reconstruction; VI. Modern Methods; VII. Therapeutic Objectives and Results; VIII. Handicraft, Education and Art; IX. Conclusion. All bear witness to the thoroughness with which the subjects are treated, that they have been written without bias and are strongly leavened with common sense. The recommendations are most practical. As a consequence there is little that can be criticized.

Quotations from a number of other writers to whom credit is given enrich and emphasize the views expressed by the author. The book is heartily recommended to all who are interested in the rehabilitation of the handicapped and especially to physicians and occupational therapists.

W. R. D.

A PSYCHOLOGY OF GROWTH. By *Bert I. Beverly, M. D.* (New York: McGraw-Hill Book Co., 1947.)

Dr. Beverly has written this book primarily for nurses, to help them in their care of patients and in understanding their own personality adjustment problems. The material presented is an outgrowth of 15 years' teaching student nurses.

As an effort to give nurses a point of view concerning personality development and mental health, it is excellent. The author has drawn on his rich experiences in childrens' behavior clinics and private practice to give reality and meaning to theory. His approach is a practical, common-sense one. His discussion of childrens' fears in relation to medical care generally, and preparation for operations specifically, would be most helpful to the nurse who, frequently, is the child's sole support in a traumatising experience, psychologically as well as physically. Dr. Beverly's description of parental attitudes in the rôle of shaping a child's emotions is likewise excellent. The discussion of nursery schools weighs their merits and hazards in a helpful way.

Unfortunately, however, many statements are made which give an erroneous factual impression. For example, page 7, "All behavior is expressed in terms of habit"; page 20, "The two-year old . . . . does not discriminate between colors, even though he may know the color names"; page 36, "The four-year-old child is able to take full responsibility for food, sleep, dressing, and toilet habits; . . . ."; page 164, "One evidence of mental growth is the appearance of the ability to do abstract thinking, which begins at the age of twelve"; and page 165, "At adolescence, for the first time, children see themselves as others see them." Reading between the lines, or sometimes in the subsequent text, it is apparent that these statements do not convey the meaning intended. Unfortunately, in a text for persons not trained in child psychology, the statements are likely to implant false information.

It is hoped that Dr. Beverly will revise this much needed book so that it will find acceptance, since it is a realistic and vivid presentation of crucial experiences in the development of personalities.

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HANDBOOK OF CORRECTIONAL PSYCHOLOGY. *Edited by Robert M. Lindner and Robert V. Seliger.* (New York: Philosophical Library, 1947.)

The editors of this handbook have recognized the serious lack of adequate texts in this field and, perhaps in their zeal to be among the first published in this comparatively new field, have committed some serious editorial errors. The chief errors in the book are lack of index, poorly organized bibliography, and table of contents which is not too helpful in search of authors and topic.

It is certainly true that scientific thinking has but recently invaded the penal system, and men trained in psychologic thinking are being attracted in larger numbers. This book points up these facts, and many of the chapters are well worth careful reading.

Some of the chapters, however, have very local interest and might well be eliminated in a book of this kind. What has been included in the text about children and adolescents is good, but the book would profit by expansion in discussing the younger criminals and delinquents. Many approaches are demonstrated, and the reader can discard what he feels is nonutilizable. However, this book is recommended reading for those in the field, and it is hoped that some defects might be corrected in later editions.

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MENTAL MISCHIEF AND EMOTIONAL CONFLICTS. By *W. S. Sadler, M. D.* (St. Louis: The C. V. Mosby Company, 1947.)

A good deal of psychiatric writing has recently been directed at the layman or prepared for his consumption. Both factors probably apply to this book. The author says it is written for the benefit of "the average person who suffers from a functional nervous disorder or in whose immediate family there are victims of emotional conflict or mental mischief. . . . ." There have recently appeared in psychiatric literature several warnings of the potential danger of such well-motivated efforts, along with suggestions that more harm than good may ensue. There would certainly seem to be more reason to think that neurotics or potential neurotics might be injured in such manner than might be the better integrated reader who apparently is included in the second group at whom this book is directed.

The volume includes 34 chapters with such titles as Mischief-Making Complexes, Habit Pains and Hypochondria, Manipulating the Reality Feeling, Major Depressions, and a Philosophy of Life. Discussion of these topics is given in a forceful and direct but necessarily superficial manner.

This reviewer was somewhat surprised at the extent of the religious views concerning "A Philosophy of Life" as expressed by the author. Many experienced psychotherapists will object to such statements as, "In my opinion prayer is a master mind cure and personal religious experience is the highest and truest form of psychotherapy." On the whole the reviewer was disappointed in this volume.

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WOMEN WERE NOT EXPECTED. By *Lt. Col Marjorie Peto, R.N.* (Published by the author at 1293 Sussex Road, West Englewood, N. J., 1947.)

As the title page states, this is "An Informal Story of the Nurses of the 2d General Hospital of the ETO." It is a delightfully informal account of the amusing incidents and of the social life of the group. Perhaps some readers might have wished that the author had given more of the professional side of this experience, but while these accounts are at a minimum we find them scattered throughout the book. There is much that is amusing and intimate, in part gained by the introduction of letters written to parents and others. Throughout, the reader feels in close sympathy with the author, which increases the enjoyment of perusal.

Lt. Col. Peto is now assistant professor of nursing at Presbyterian Hospital (Columbia University School of Nursing) and is also assistant director of nursing, Babies Hospital.

To those who served in the ETO the book should stimulate many similar memories. Those who did not have such experience will be diverted, as well as informed of the "life they led." That they kept their morale under conditions of hard work, dirt, and other physical discomforts is a matter for pride in which all will share.

There are many illustrations from snapshots which add to interest and pleasure in reading.

W. R. D.

LAW AND THE PRACTICE OF MEDICINE. By *Kenneth George Gray, M.D., K.C.* (Toronto: The Ryerson Press, 1947.)

In this compact volume (68 pages) Dr. Gray discusses the legal problems that most frequently confront doctors and hospitals in their medical work.

Dr. Gray, who is qualified as both doctor and lawyer and is also a certified psychiatrist, explains in this volume the law as it applies throughout the Dominion of Canada, with provincial variations noted. The material was gathered largely in the course of the author's lectures on medical jurisprudence and forensic psychiatry at the University of Toronto and in his work as legal adviser to the Department of Health and Hospitals of Ontario.

While the text is based on Canadian law, usage generally in the United States is not dissimilar, and both American and Canadian readers will find it a convenient authority. Occasional statutory references applying to local jurisdictions are clearly indicated.

The value of the book is emphasized by its clear and simple language and by a classification of topics and an index that facilitate ready reference.

After stating the sources of law, describing the constitution of courts, and defining legal terms and procedures, the author discusses the question of evidence—opinion and expert—and offers valuable suggestions for the guidance of the witness in court. He then takes up the subject of actions of negligence which may involve doctor, nurse, or hospital and the questions of liability in unauthorized operations, sterilization operations, and unauthorized autopsies. The topics of professional secrecy, business relationships in the practice of medicine, the operation of hospitals, and licensure are dealt with in separate chapters. Particularly useful is the section on psychiatric problems and questions of mental capacity in various situations in both civil and criminal cases. A brief exposition of public health administration closes the volume.

An index of statutes, cases, and texts is included.

This work is the fruit of extensive experience, from which the salient features have been selected and given terse expression. The purpose was to produce a convenient handbook rather than an elaborate treatise. So far as the reviewer knows, no similar compilation has hitherto appeared.

C. B. F